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PRESERVING AGRICULTURAL LANDS

case study
westfield, massachusetts

local assistance series 2

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PRESERVING AGRICULTURAL LAND

CASE STUDY

CITY OF WESTFIELD, MASSACHUSETTS

LOCAL ASSISTANCE SERIES
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TABLE OF CONTENTS

PREFACE.....i

SUMMARY.....1

USE OF THE REPORT.....7

PART I - PRESERVING FARM LAND

Chapter 1 - An Overview of the Problem.....9

1. ZONING.....10

2. TAXATION.....13

3. CRITERIA FOR A FARM LAND PRESERVATION PROGRAM.....16

4. A DEVELOPMENT RIGHTS PROGRAM.....17

5. AGRICULTURE IN MASSACHUSETTS - A STATISTICAL SUMMERY.....21

PART II - FARMING IN WESTFIELD

Introduction - Land Use in Westfield.....23

Chapter 1 - Farms and Farmers.....27

1. A NOTE ON INFORMATION SOURCES.....27

2. FARMS.....27

3. PRODUCTION ECONOMICS.....30

4. FARMERS: SONS, DEBT AND LAND.....35

5. FARM LAND OWNERSHIP.....38

6. RENTAL LAND.....40

7. REAL ESTATE VALUES: ASSESSED, MARKET AND AGRICULTURAL.....44

Chapter 2 - Preserving Farm Lands: Public Purchase of Their Development Rights.....51

1. A PROGRAM TO BUY DEVELOPMENT RIGHTS IN FARM PROPERTY.....51

2. COMMUNITY PLANNING.....53

TABLE OF CONTENTS CONT.

3. BENEFITS TO FARMERS.....54

4. COST OF DEVELOPMENT RIGHTS.....56

5. PROPERTY TAXES.....58

6. RESERVATIONS AND ISSUES.....58

1. Who Decides?.....59

2. Freedom.....59

3. Eligible Property 60

4. Adjacent Uses.....62

5. Use of Farm Land by Bonafide Farmers.....62

6. Compulsory or Voluntary?.....64

PART III - LAND USE IN WESTFIELD - A DETAILED LOOK

Chapter 1 - Urban Lands and Development.....67

1. POPULATION AND DENSITY.....68

2. DENSITY OF URBANIZED AREAS.....70

3. CATEGORIES OF URBAN LAND USE.....71

4. ASSESSED REAL ESTATE VALUES.....72

5. HOUSING CONSTRUCTION.....74

6. SUMMARY.....76

Chapter 2 - Farm Lands and Urban Development Potential.....81

1. A NOTE ON INFORMATION SOURCES.....82

2. FARM LANDS AND SHIFTING LAND USES -- MacCONNELL.....83

3. FARM LAND -- U.S. AGRICULTURAL CENSUS.....88

4. COMPARISON OF LAND USED FOR FARMING TO LAND SUITABLE FOR FARMING.....91

5. FLOOD PLAINS -- SUITABILITY FOR AGRICULTURE AND URBAN SEWAGE DISPOSAL.....97

6. SPACE AVAILABLE FOR BOTH FARMING AND URBAN DEVELOPMENT.....102

TABLE OF CONTENTS CONT.

7. FARM AREAS THAT MIGHT BE PRESERVED BY A DEVELOPMENT RIGHTS ACQUISITION PROGRAM.....106

APPENDIX - Land Use Mapping: Sources and Procedure.....110

REFERENCES.....112

PREFACE

This report is part of a special series of local assistance studies undertaken by the Community Planning and Management Section, Office of Local Assistance, of the Massachusetts Department of Community Affairs, financed in part through the Federal HUD 701 Planning and Management Assistance Program. This series of studies represents a departure from previous efforts of the Department in providing technical assistance to Massachusetts communities under 50,000 population. Earlier efforts of the DCA concentrated limited staff and consultant resources to produce long-term (1 to 2 year) master plan studies for only a few of the Commonwealth's cities and towns each year. In contrast to this former approach, DCA's delivery of technical assistance now concentrates short-term efforts on addressing urgent local issues of state-wide significance, through the use of the case study or model approach.

A key element in this style of technical service delivery is that DCA staff and consultants attempt to achieve solutions which might help many communities by gaining concrete and practical insights into a problem in the context of a given community. In this way, other communities facing similar problems can benefit from the work performed in the model community.

This study concentrates on the problems of protecting agricultural land, and the model community was the City of Westfield. Other studies conducted as part of this new service and the communities in which they were carried out are as follows: Establishing a Department of Community Development, Peabody; Evaluating Development Impact, Chelmsford; Developing a Land Use Management Process, Mashpee; Organizing for Economic Development, Wareham; Monitoring Change in Residential Neighborhoods, Melrose; Revitalizing Small Town CBSs, Millbury; and Evaluating Reuse Options for Large Institutional Land Holdings, Lenox. These projects were selected by DCA from among 70 applications by over 50 municipalities under 50,000 population from across the state.

The Planning and Management Section of the Office of Local Assistance wishes to acknowledge the contribution of the many local officials and citizens who were involved in these studies. Without their interest, cooperation, and critique, these studies would not be as meaningful to you.

We urge you to contact the Office of Local Assistance for further information if your community is considering action in the area covered in this report. Let us know too, if you find these studies useful or have any suggestions in improving DCA's new program of technical assistance.

SUMMARY

. A municipal government's primary, existing means of affecting its land uses it its zoning authority. But zoning efforts to preserve farm lands typically have failed to cope with the economic realities facing farmers in using land. Consequently, our study would have had little value to Westfield residents or others if its focus were only on what they could do, on the local level, to preserve their farms.

. As our study began, a statewide farm preservation program was in preparation, under the direction of Massachusetts Commissioner of Agriculture, Frederic Winthrop, Jr. The basic elements of such a program were as follows:

- all agricultural land in the state was to be categorized in two ways, (1) in active farming use and (2) as prime land suitable for agriculture according to soil conditions.
- owners of property determined eligible under the program (according to the break-down carried out above) could choose to sell the "development rights" of their property to a state agency or trust which would thereby remove the "right" to develop the property for a non-agricultural use.
- the owners would continue to own the land and be free to use it for agricultural purposes.
- the price for the "development rights" would be determined by assessment techniques, based on the difference between the property's agricultural productive value and its market real estate value. It would be negotiated between municipal

officials and the property owners concerned.

- the value of the property realized through subsequent, private sales would be based on the market demand for farm real estate which could not be developed for non-agricultural uses.
- the program would be financed through an increase in the state's real estate transfer tax.
- the program would be administered by an agency affiliated with or attached to the state Department of Agriculture.

. While similiar proposals have been taken to various stages of development in other states, only one has thus far been enacted, and that at the county level (and the funding for that program has yet to come through). Often the proposals have floundered on questions of the relationship between state government and local communities in the implementation of such a program. Thus, we saw our task as an opportunity to focus on how the proposed development rights program might be received and work in one community, and, in so doing, serve both the residents of Westfield and the other communities in the Commonwealth, as well as officials at the state level. This has real value because we have concluded that the approach of a state government buying development rights in farm property is perhaps the only realistic one for preserving significant acreages of farmland in the Northeast.

. It is not the intent of such a program to deal effectively with the problems affecting the current cost/price squeeze of the economics of farm production; rather it addresses issues relating to agricultural land use. Nevertheless, it will help

improve the agricultural economic situation by addressing this land use question as well as by bolstering the confidence of the farmers as a result of preserving a large enough quantity of farmland across the state.

. While we have examined what previously recorded information on land use exists in Westfield, we have also relied heavily on how city people and farmers living there see their situation. During November 1975 some thirty, lengthy interviews were held with Westfield residents, several county agricultural officials, and members of the University of Massachusetts agricultural school faculty. Although everyone's situation in the city was unique, common threads emerged. We have tried to recount them faithfully here.

. Westfield is a city of 34,000 residents, whose rapid rate of population growth and urban land use since World War II will very likely continue under the suburbanizing influence of the Springfield metropolitian area.

. A substantial area of Westfield is actively farmed, with most farms apparently successful economic operations. The city has been in the past, and remains today, much more an agricultural area than either Hampden County or the Commonwealth overall.

. Some of Westfield's urban residents believe: (i) that no significant amount of farm land has been used by the city's urban expansion in the recent past; but (ii) that today, land other than currently farmed land suitable for development has been used-up, and that future development will have to use presently farmed land.

- We found both of these beliefs to be unfounded, and that, rather: (i) a little over half of the city's urban expansion between 1952 and 1972 has been onto previously actively farmed land; and, (ii) ample land area physically suitable for development, other than currently farmed land, is available for future urban use (the undeveloped area of the city suitable for on-site sewage disposal and not now farmed, is 25 percent larger than the total area used in the city's urban expansion between 1952 and 1972).

. Thus, accommodating future urban expansion while preserving Westfield's actively farmed lands could theoretically be accomplished. However, in the absence of a deliberate public effort to direct urban development away from currently farmed lands, the city's present farm areas will, in general, likely be sought for building sites because of their location, access from existing roads, and ease of development.

. In the meanwhile, owners of farm land (both farmers and non-farmers) appear unwilling to sell their land, or if so, only at a "top dollar" value for some potential urban use. Active farmers cannot afford to pay current "market" prices for farm land out of farm incomes from the land (except where favorable financial transactions can be arranged between family members). The effect is a "frozen" real estate market in Westfield for farm property, even if there is no present demand for it for any other use.

. As Westfield farmers have had to expand the size of individual farm operations for economic reasons, they have had no choice but

to rent the additional land needed -- it has not been available to buy. We estimate some 40 percent of all the tilled land used by full-time farmers in the city is rented, with numerous ill-consequences for them. The overriding effect is, however, that farmers can not be sure of a future access to the land they need to stay in business.

. The Westfield farmers interviewed through this study generally felt a public purchase of development rights in farm property would benefit them as farmers, provided they would be assured future access to the land they now rent, or suitable alternative land areas. Reservations about a development rights program were also expressed.

. Inherent in the Massachusetts proposal to preserve farm lands is an intent to move from a strictly free market system of allocating agricultural land uses, to one where the public good could be better served. In making this transition from one system to another, the degree of public intervention in the present system considered sufficient can be questioned.

Thus, the success of a farm preservation program in Westfield would depend on acquiring development rights in substantial acreages of farm land, owned by people with various motivations, in order to (1) "thaw" the present farm real estate market, and (2) guarantee that the land farmers need will be available in sufficient quantity in the future. Active farmers very likely would now be willing to sell their development rights, in order to obtain a more secure agricultural future. For

various reasons, however, a significant proportion of Westfield's farm property may not, on a parcel-by-parcel inspection, possess a present market real estate value beyond the agricultural value of its current use.

Accordingly, were farmers told they could not sell their development rights today, but would have to wait until a non-agricultural demand for their property was manifest, the objective of the program of restoring confidence in the future of farming could well be thwarted.

Thus, it might be prudent for the Commonwealth to offer to make a flat, minimum payment to all farm land owners wishing to sell their development rights, even if such a payment would not reflect actual market conditions. Higher payments for development rights in property with higher market values could still be made as proposed by the Massachusetts Department of Agriculture.

USE OF THE REPORT

This report is intended for use by local officials in cities or towns throughout the Commonwealth. Accordingly, there is some information which applies in general to the issue of the preservation of farm land and the tools available to meet that objective, while some information applies uniquely to Westfield, for which the case study was done.

the Summary is the quickest way of learning about the findings of the report.

Part I presents an overview of the problem, sets the proposed Massachusetts development rights acquisition program in context, and offers some general data on the state's agricultural situation.

Part II summarizes the land use situation in Westfield (which is done in more detail in Part III of the report for Westfield readers) and relates the problems associated with farming in the community to those problems facing the farming industry in general. This part is based on interviews with farmers and other local people in the city.

It also discusses the state's attempt to devise a program for the public acquisition of development rights of farm land -- from the point of view of the farmers in Westfield and as a technical analysis of the program in itself. This part presents the conclusions of the report.

Part III is a detailed, statistical analysis of the land use situation in Westfield and offers a quantitative evaluation of what

land might be put under the state's program. While the data is specific to Westfield, the methodology used in compiling and analyzing the information might be useful to other communities desiring to do the same. The results produced by careful mapping are important in their own right.

The Appendix capsules the categories used in the mapping, the procedure for mapping, and provides reduced copies of the base map and overlays as drawn. The colored land use map, which was presented to Westfield, could not be reproduced in this report. The References provide the basic resource material which could be used for anyone interested in reading more on the subject of farm land preservation.

For those communities in Massachusetts facing similiar problems concerning the loss of prime agricultural land as those confronting Westfield, there are several steps which should be taken:

(1) read this report and consult the sources of information to which it refers.
(2) do the mapping to get accurate information on past trends, potential land use conflicts and to develop appropriate planning and zoning strategies.
(3) talk to your local farmers and owners of agricultural land about their problems, needs, expectations and opinions about the development rights acquisition program under consideration by the state.
(4) visit the many Agricultural Officials working in your county.
(5) support the state legislation which will be drafted to start this program.

PART I

PRESERVING FARM LAND: AN OVERVIEW

Chapter 1 - An Overview of the Problem

Recent food shortages and sky-rocketing prices have prompted officials in several states to investigate their cause and to propose legislative remedies. A situation common to the states concerned is the substantial loss of agricultural lands over recent decades. In Massachusetts, for example, a recent report of the Governor's Commission of Food noted a decline in numbers of farms in the state from 35,000 at the end of World War II to about 6,000 today; at the same time, actively farmed acreage has declined from over two million to approximately 700,000 acres.[1] As a result of this trend, farmland preservation has become a major legislative effort in several states, including: Massachusetts, New York, New Jersey, Connecticut, Vermont, Michigan, Pennsylvania, Maryland, Virginia, California and Washington.

The common concern among these states is maintenance of an adequate regional food supply at reasonable prices. Conserving and, indeed, increasing the supply of locally produced food has become a land use planning issue because of conflicts among competing demands for agricultural land. The heaviest demand for food is, naturally, in urban areas where population concentrations are greatest. Until recently, many food staples were produced within a few hundred miles of the metropolitan areas in which they were

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1 For further data on the Massachusetts agricultural situation refer to the last section of this chapter.

consumed. However, increasing urbanization, characterized by haphazard land use patterns, have consumed much of the prime agricultural land which produced this food. Agricultural land is most vulnerable to development pressure arising from these patterns of growth, primarily because of its relatively low price and its suitability for subdivision and development.

Because of a loss of agricultural land, many of the more urban states are relying increasingly on importing food. As rising costs of energy escalate the costs of transportation and refrigeration, imported food is no substitution in any economic sense for "home-grown" foodstuffs. Furthermore, the trend of relying on fewer acres to grow more of our food causes plants and animals to be increasingly vulnerable to diseases, infestations or insects, or damaging weather conditions. States like Massachusetts, which now imports 85% of its foodstuffs, are beginning to realize the need to counter these trends, to lessen their dependence on imported food resources, and to move toward some degree of self-sufficiency. To do this, they need to preserve what prime agricultural land remains as a critical natural resource.

1. ZONING

Relatively few state programs across the country have addressed the problem directly and local government tools have been inadequate. One approach has been through exercise of the police power authority to zone land for certain uses. This power, traditionally employed only in urban areas where conflicting land uses have required the imposition of some local control over them, has gradually been utilized by rural communities to create

agricultural zones which restricted all other uses except for varying degrees of low density residential use. For the most part, however, local zoning control has not totally excluded residential uses from agricultural zones. This has been due mainly to unresolved issues of taking vs. regulation, public benefit vs. private right, and just compensation. Local zoning officials commonly defer in fact to the wishes of private property owners, seeking to realize the maximum return on the market value of their properties. This practice precludes the possibility of preserving significant farmland acreage through zoning alone. Zoning channels development in such a way as to reduce conflict; it does not stop development, nor does it lock land use into a permanent mold.

The California and New York State legislatures, on the other hand, have attempted to strengthen the zoning mechanism through the creation of exclusive agricultural districts -- which prohibit residential sub-division and development within their boundaries -- thus protecting prime agricultural land from being lost to development. In both states, the perceived public benefit of preserving agricultural land in primarily rural areas has been legally upheld as a justifiable exercise of the police power, while similiar open space protection devices have been characterized as exclusionary zoning in the suburbs.

The New York situation is worth noting. Enabling legislation passed in 1971 allows farmers to petition the county for the

purpose of creating agricultural districts. These districts protected existing farms from selling-out to developers by precluding urban uses within their boundaries. Within these districts local ordinances restricting or regulating farming practices, such as nuisance regulations, were limited, as was the taxing power of public service districts for sewer, water, lights, and nonfarm drainage. The purpose of the legislation was to encourage the continuance of a strong agricultural industry and to discourage the urban development of good farm areas.

Since enactment of the bill, 3,000,000 acres have been placed in agricultural districts across the state. Information to date indicates that agricultural districts have worked in the "outer fringe", that is, semi-rural areas of the state, but they have not worked in the "inner fringe", that is, semi-suburban areas.[2] In the latter category, growing development pressure has affected farmers throughout the area. Their prospects of realizing a high return for selling-out overrode their desire to remain in farming themselves, or to keep the land in farming. In this situation, the market value of the land is so much greater than the farm use value that an asking price for farmland can not be amortized through returns based on farm productivity, so other farmers can not afford to buy it. Thus, the land is converted to a more intensive use. In rural areas where farmers do not face such development pressures, and perceive that they won't for decades, they essentially swap the chance to sell at inflated market prices

2. conversation on December 30, 1975 with Howard E. Conklin, Professor or Regional Agricultural Studies, Cornell University, Ithaca, New York.

for the insurance of being allowed to continue in farming without having to face restrictive ordinances or "over-taxation".

2. TAXATION

The issue of taxation within agricultural districts is a crucial one. Farmers within such districts in New York may apply for an agricultural value assessment on their land, thus keeping the relationship between taxation and agricultural productivity consistent. Originators of the legislation believed this opportunity would become a major inducement to farmers to place their land in agricultural districts, particularly in urbanizing areas where market values exceeded the agricultural value of farm property, with resulting tax burdens jeopardizing the economics of their operations. The information collected to date indicates, however, that in most cases farmers have not applied for agricultural value assessments. This fact is consistent with data indicating that agricultural districts have been created, for the most part, in rural areas far removed from predictable development pressure. In these areas assessments have generally been low and thus not an economic burden to farmers.

In those few areas in New York where urbanization has been responsible for proposed tax increases which would shift a great burden on to farmers (approx. $50/acre in taxes in Orange County), obtaining a lower tax assessment has been a prime motive of local farmers requesting establishment of agricultural districts. Growth predictions for Orange County, for example, were not so high that most farmers could realistically anticipate selling out at greatly

inflated prices. Therefore, they opted for the agricultural district mechanism to protect their farms from over-taxation and to insure their ability to continue farming in the face of haphazard growth pressure.

On the other hand, in Suffolk County, New York, development pressure moving out Long Island has been too intense and too pervasive for the agricultural districts option to work. The rising market value of farmland, and farmer's expectations of financial gain from selling their properties, overrode any insurance of continued farming which reduced taxes and other farm benefits might have brought. Some other mechanism was needed to address this situation - which will be discussed below.

Preferential tax schemes by which farmers agree not to sell their farmland for development in return for lower tax assessments based on agricultural use are an approach currently being practiced by several states. As the New York experience has shown, however, it is used where it is least needed to protect farmland - where development pressures are practically non-existent. On the other hand, experience with the Massachusetts Farm Land Assessment Act (Chapter-61A) indicates that farmers who thus far have made use of the Act tend to be those with small operations in the eastern section of Massachusetts, not the major food producers in the state. At the present time there are 58,000 acres under Chapter 61A in 100 different communities. 80 of the 100 communities are east of Worcester. The vast majority

of prime farmland in the Connecticut River Valley and in the western part of the state is presently being assessed at reasonable enough rates so as not to require such abatements. The New York and Massachusetts program are significantly different, however, in that New York farmers are obliged to give up the opportunity to sell at development values to receive tax benefits, whereas Massachusetts farmers receive tax benefits without having to give up the right to sell-out. This difference may account for the varying acceptance of preferential tax programs by farmers in the two states. Moreover, it should be noted that at this time information about the Massachusetts program is not sufficient to indicate whether most farmers in outlying parts of the state are even aware of the program, or would apply for a tax reduction if, in fact, they were aware of it.

In any case, preferential tax programs fail, as does zoning, to address the issue of the farmer's expectation of selling his farm when the price is right, even if it means enduring higher taxes in the interim. Nor does it take account of the view that by paying high property taxes in the past, farmers have earned the "right" to recoup this investment through selling their property at high, development values. Moreover, farmers usually have no pension or retirement program; thus, they depend on the profits from selling their farms to support themselves when going out of business. Finally, tax abatement programs might actually induce developers to make advance acquisitions of farmland, apply for farm use assessments while keeping the land in farm use until the time is ripe for development. Although

Massachusetts has an additional penalty provision in its Farm Land Assessment Act to discourage developers from doing this, it is not at all clear that this provision will serve that purpose. Thus, other land use control measures are needed if prime farm land is to be kept in agricultural use.

3. CRITERIA FOR A FARM LAND PRESERVATION PROGRAM

The principle of farm lands in farm use has been legally upheld as "public benefit" in several states. However, factors other than legal principles must be addressed if a system of effective controls is to be found. The complexities of satisfying political, economic, environmental, as well as legal concerns, are indeed great. The following criteria developed to assist in the evaluation of any farm land use policy are worth considering here:

1. Land use controls should provide a permanence which is stronger than zoning or planning controls or preferential tax plans currently used in order to protect agricultural land and to gain confidence of the farmers in any program which they are being asked to support.

2. Land use controls which restrict land to agricultural use only, thereby denying owners the right to development, must provide just compensation for the development rights taken away.

3. Any taking of property rights to assure the permanence of the land use should be restricted to the development rights of the land alone, leaving the land itself in private ownership and control.

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3. presented by William L. Park, Chairman, Department of Agricultural Economics and Marketing, Cook College, Rutgers University at the Conference on Rural Land-Use Policy in the Northeast at Cornell University, October 2-4, 1974.

4. Land use controls should be balanced between local and state agencies which have planning and zoning authority.

5. Costs of the program, should be equitably distributed among those who benefit there from. The cost of compensating the farmers for the rights taken from the land should be paid out of capital gains values of land arising from the provision of public services and infrastructures.

Land-use policies such as planning and zoning controls, agricultural districts and preferential tax plans, as previously discussed, are all stop-gap measures which cannot be relied upon to preserve the critical mass of agricultural land needed. Other measures, such as covenant systems and easement dedication or land trust techniques, are also insufficient to address the problem and to meet the criteria spelled out above. One other approach, the transfer of development rights (TDR), is more comprehensive and might, in fact, provide a useful solution to the problem. However, complexities of the TDR approach, the unresolved issues it raises, and the practical difficulties in developing an implementation plan have precluded its serious consideration by state officials at this time. Most observers feel it is politically infeasible to push the concept prematurally before there is a better understanding of how it would work in practice. The approach which is gaining support in several states, among them Maryland, New Jersey, Massachusetts and Suffolk County, New York, is therefore, one involving the outright public purchase of development rights in agricultural property.

4. A DEVELOPMENT RIGHTS PROGRAM

The basic approach in all three states is similar in the following provisions: (1) local municipalities are directed to designate the

prime farmland to be preserved (except in Maryland where the farmers first offer their land); (2) land in the preserved areas is limited to agricultural and related open-space uses only; (3) landowners in the preserved areas may sell the development rights of their land to the State for the difference between the market value and the productive farm value of such land; (4) the program would be financed by a real estate transfer tax on all real property in the state; (5) the program would be administered by an agency attached to the state Department of Agriculture.

The principle advantages of such a program, in relation to addressing the criteria outlined above, are as follows:

(1) A sense of permanence in land use is achieved by the purchase of development easements which modifies the deed and restricts the use of the land to agriculture and related open space uses for any future purchaser.

(2) It provides for just compensation for the fair market value of property rights taken from the landowners.

(3) It retains privately owned and operated farms.

(4) It distributes the cost of the program widely to all property owners in the state involved in property transactions.

(5) It provides balanced contributions from both state and local authority in terms of its mechanism for state guidelines and local initiatives.

(6) It addresses the problem of tieing the acquistion prices of farms to their value as farms, thus enabling farmers to buy land at prices which can be paid out of farm incomes produced by the land. At the same time, it allows the existing farmer to make the profit he is entitled to (if his farm has a development value greater than its farm value) by selling the development rights while continuing to farm, if he chooses.

(7) It would preserve land for agricultural use at a sufficient scale statewide to address the problem of the increasing loss of valuable farmland.

Many other issues surface in any proposed program dealing with the acquisition of development rights or development easements; some which are not taken into account effect the political palatability of legislative proposals. New Jersey and Maryland have discovered this as both have had development rights legislation bogged down for over a year -- with a "slight" chance seen for passage in the coming year. Such correlary issues include: implications of the sale of development rights on the capital gains tax, inheritance tax, and personal income tax; the relationship between agricultural districts and cluster zoning techniques involving possible "double payments"; a determination of fair market value which both satisfies an individual farmer and is equitable among groups of farmers; and, the relationship of the severed development rights to the tax base in the community.

Massachusetts is in the process of drafting its own legislative package, under the direction of the state Department of Agriculture. The planning and development of this proposal, unfortunately, has had to rely more on hypothetical thought-processes than on empirical data -- simply because the latter does not exist. There is no similiar development rights program in operation in the country from which to learn about actual

conditions. While the development rights concept appears appropriate to the task, it is complex and its implications are far-reaching. This report, hopefully, will provide information and raise questions useful not only to the drafters of the upcoming Massachusetts legislation, but to local officials in Westfield and other communities around the state.

5. ACRICULTURE IN MASSACHUSETTS: A STATISTICAL SUMMARY

	1969	1964	1959	1954	1950	1945	1940	1935
All Farms - number	5,703	8,019	11,179	17,361	22,220	37,007	31,897	35,094
Farms with gross sales of $5000 and over - number	3,054	4,300	5,220					
Farms with gross sales of $20,000 and over - number	1,654	1,795	1,815					
Farms with gross sales of $40,000 and over - number	774	760	557					
FOR ALL FARMS:								
land in farms - acres	700,578	901,789	1,142,341	1,439,080	1,660,389	2,078,349	1,937,963	2,195,714
average size of farms-acres	123	113	102	83	75	56	61	63
Proportion of state land area in farms	14.0%	17.9%	22.7%	28.6%	33.0%	41.1%	38.3%	42.7%
Farm land use:								
-Harvested cropland								
all farms - acres	189,635	234,443	290,682	331,180	376,036			
per farm ave. - acres	33.3	29.2	26.0	19.1	16.9			
-Pastured & other cropland								
all farms - acres	90,820	113,390	154,471	219,433	248,340			
per farm ave. - acres	15.9	14.1	13.8	12.6	11.2			
-Other non-wooded farm land								
all farms -acres	110,280	149,191	185,164	217,861	295,877			
per farm ave. - acres	19.3	18.6	16.6	12.5	13.3			
-Farm woodland								
all farms - acres	309,842	404,765	512,024	670,606	740,136			
per farm ave. - acres	54.3	50.5	45.8	38.6	33.3			

	1969	1964	1959	1954	1950	1945	1940	1935
Average value per acre:								
- value of all farm products sold	$198	$154	$111	$87	$82			
- market value of farm real estate (land & bldgs)	$565	$386	$310	$224	$190			

	1964-69	1959-64	1954-59	1950-54	1950-69
Percentage change per acre:					
- value of all farm products sold	+28.6	+38.7	+27.6	+6.1	+141.5
- market value of farm real estate (land & bldgs)	+46.4	+24.5	+38.4	+17.9	+197.4

	1969		1964		1959		1954		1950	
		% of no./total		% of no./total		% of no./total		% of no./total		% of no./total
Farm land tenure										
All farms	22,220	100	17,316	100	11,179	100	8,019	100	5,703	100
-full owners	18,766	84.5	14,019	81.0	8,422	75.3	5,643	70.4	4,058	71.2
-part owners	2,440	11.0	2,623	15.1	2,242	20.1	1,875	23.8	1,355	23.8
-tenants	737	3.3	420	2.4	338	3.0	344	4.3	290	5.1

Definitions of farm land tenure:

full owners - farmers who operate only land they own
part owners - farmers who operate land they own and land they rent from others
tenants - farmers who operate land they rent, or work on shares, from others

SOURCE: U.S. AGRICULTURAL CENSUS

PART II

FARMING IN WESTFIELD

Introduction - Land Use in Westfield

WESTFIELD, MASSACHUSETTS. Settled in 1660; established as a town in 1669; incorporated as a city in 1920. Located in Hampden County nine miles West of Springfield, on edge of Connecticut Valley lowlands. Watershed drained by the Little and Westfield River. Land area, 46.7 square miles; 19 percent occupied by urban uses; 45 percent with slight or moderate limitations for farming and still unoccupied by urban uses in 1972. Traversed by the East-West Massachusetts Turnpike, with access to the North-South I-91 Interstate Highway. 1950 population 20,962; 1970 population 31,433. 1970 population density, 674 people per square mile. 60 percent of 1970 population over five years old lived in the same house in 1965; 24 percent lived in a different house but in Hampden County in 1965; 16 percent lived outside Hampden County in 1965. 38 percent of employed labor force worked in manufacturing jobs in 1970. Median family income of $10,614 in 1970. 8 percent of all families with incomes less than 125 percent of poverty level in 1970. 37 commercial farms in operation in 1970, occupying 20 percent of city land area.

Westfield is a rapidly growing urban community where sizable farming areas are overshadowed, if not yet overtaken, by expanding non-farm land uses.

Until recently, city people in Westfield had not viewed urban growth as a threat to farming. People have been moving to Westfield because it is "a nice place to live", in large part due to the broad pastoral scenes maintained by active farming. With one of the largest land areas of any municipality in Massachusetts, many people believe Westfield's recent urban expansion, particularly of residential developments, has fitted comfortably into wooded areas without using the citys' better agricultural lands. Downtown

commercial and industrial expansion has, in the view of city people, used for the most part abandoned tobacco fields which former farmers were happy to be able to dispose of.

Farmers view these land use changes from a different perspective.

While sizable acreages of tillable farm land do remain in Westfield, it is not true, as city people say, that urban development has used only insignificant amounts of farm land. Every farmer interviewed through this study recalled choice farm acreage he might have bought fifteen or twenty years ago now in a shopping center, an industrial plant, or subdivided with houses built upon it. Moreover, the available statistical information indicates a substantial decline in Westfield's open agricultural lands since 1950.

It is true that Westfield farmers had a decade or two ago shared their city neighbor's view that plenty of farm land would always be available in the city. Since World War II, farmers have been continuously pressured by the economics of farming to expand the size of individual operations. Economically marginal farms went out of business. The ones that remained became larger. But with farm land aplenty in the 1950's and early 1960's, many of the remaining farmers found it cheaper to rent the additional land needed than to pay the mortgage and taxes on purchased land. Today, however, the majority of Westfield farmers have no choice but to depend on land owned by someone else for continued access

to the acreages they need.

More important today than how much farm land has been lost is what will become of what is left. City people and farmers alike anticipate continued urban expansion. It is commonly believed that the non-farm areas of the city suitable for building have been used up, and that the farm lands will be the next to be developed.

The non-farmer owners of farm land who in the past have not sold their land for development have either wanted simply to keep their land open, or in anticipation of future development demand have held out for the "top dollar" in land prices. Having held on to the land for either reason, it has not been available to farmers at prices they could pay from a farm income. Since 1955, only one sale of farm property as farm property between individual operators has occured in Westfield. Sooner or later, Westfield farmers believe today, the land they rent and need to stay in business will likely be gone.

Yet, it is not true that all but actively farmed land physically suitable for development has been used up, and that future development will have to use presently farmed acreage. It probably is true, however, that currently farmed land would be the easiest to develop for urban uses, and that it likely will be developed if no effort is made to direct future urban expansion onto other, equally suitable lands.

Thus, in the absence of a deliberate preservation of Westfield's best farm land for farming, the city is approaching a point where continued accommodation of urban growth within an agricultural landscape will produce increased tensions between three groups: city people who want a place to live or who earn an income from urban development; non-farmer land owners who are waiting until the price is right to sell, or who will likely be pressured by events to sell even if they don't want to; and the farmers, together with their city supporters, who want to remain but need a secure access to farm land to do so.

The following two chapters discuss (i) the situation of farmers and farming in Westfield, and (ii) the farm land preservation program proposed by the Massachusetts Department of Agriculture in light of Westfield's agricultural situation. The subsequent section of this report on land uses in Westfield discusses in detail (i) urban and farm land uses, and (ii) land capabilities regarding future urban and farm land uses in the city. This latter section on land uses might be read first if the reader is especially interested in the Westfield situation, or if the reader desires a fuller context for our discussion of farming and the farm land preservation program.

Chapter I - Farms and Farmers

Whether Westfield's farms seem to have been encroached upon by urban growth is largely a matter of time and vocational perspective. Probably half of the city's urban residents have lived in Westfield less than a decade -- many less than that. Nearly all of Westfield's farmers have lived in the city their entire lives, often on farms that have been in their families for generations. The farmers know the land and what has happened to it. They know too whether continuing farming is realistic, and if so under what conditions.

1. A NOTE ON INFORMATION SOURCES

Most of this chapter is based on interviews with a variety of people involved one way or other with farming in Westfield.[1] Additional information was obtained from records of the Westfield City Assessors Office, and a few estimates have been make based on general conditions in Hampden County and Massachusetts together with impressions of particular conditions in Westfield.

2. FARMS

Table No. 1 lists the number the type of full-time farm operations in Westfield in 1965, 1970 and 1975. This list was compiled from Assessors Office records of people reporting personal property

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1 People interviewed included: fourteen people, mostly family members, involved with nine different Westfield farming operations (one tobacco, one orchard, three vegetable, and four dairy); eight county agricultural officials; five University of Massachusetts faculty members; two non-farmer owners of farm land in Westfield; the present and recently retired Westfield City Assessor.

subject to farm excise taxation. Dairy farms have predominated throughout the period, with 19 solely dairy operations existing in 1975, compared to seven vegetable operations, one tocacco, one fruit, one hay, one combination dairy-vegetable, and one combination dairy-poultry operation. Not included in this list are two nurseries currently operating in the city.

Table No. 1

Westfield

Commercial Farm Operations

Type	1965	1970	1975
Dairy	24	22	19
Vegetable	6	6	6
Fruit	1	1	1
Hay	2	1	1
Tobacco	1	1	1
Poultry	2	1	--
Mink	1	1	--
Dairy and Vegetable	1	1	1
Dairy and Poultry	2	2	1
Vegetable and Poultry	1	--	--
Vegetable and Flowers	--	1	1
Total	41	37	31

Source: City Assessors Office.

The predominance of dairy farms in Westfield is contrary to the mix of farms found on the average in Massachusetts overall or in Hampden County. Thus, 60 percent of all farms in the Commonwealth as well as in the county reported sales from "crops" in 1969, while only 30 percent of Westfield's farms in 1970 would have earned a significant income from crop production. Correspondingly, 54 percent of all farms in the Commonwealth as well as in the county reported sales from livestock and livestock products in 1960, while 73 percent of Westfield's farms earned income from this source in 1970.[1]

How significant the mix of Westfield's farm types may be in terms of overall dollar value of production is a question we have not been able to answer. For example, one of Westfield's vegetable farms is the largest producer of its type of crop in New England, while the city's dairy farms may be smaller on the average than the norm for Massachusetts.[2]

Although the total number of farms in Westfield declined by one-third over the decade 1965-1975, the productivity of farming in the city has not declined at anywhere near this rate. All current farmers interviewed told of efforts to increase production through use of more cropland and of increased dairy herd sizes.

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1 Calculations for Massachusetts and Hampden County are based on U.S. Census of Agriculture information.

2 In 1975, the average size of dairy herds in Westfield was 35 milk cows; the smallest herd was 13 milk cows; the largest was 87 milk cows. Ten herds had less than 30 milk cows; eight herds had from 31 to 50 milk cows; and, three herds had over 50 milk cows.

Thus, for example, the city's total number of mature dairy cows, as reported to the City Assessors Office, declined by only six percent between 1965 and 1975. Accordingly, the average size of individual milk cow herds increased by sixteen percent between 1965 and 1975. More significant still was an actual increase over the period of 82 percent in the total number of heifers (immature dairy cows, two years old and younger). This represents an increase in the average number of heifers per dairy farm of 124 percent over the ten year period. Since an increase in a dairy operation's number of heifers is a first step toward increasing its milk production, it is clear that Westfield's dairy farmers are committed to still larger operations. Were comparable figures available for vegetable farms, they would probably indicate a similar expansion in the size of individual operations.

3. PRODUCTION ECONOMICS

The procution economics of farming in Westfield have worsened in recent years, as they have everywhere in the region. While the costs of running a farm have increased substantially, the prices farmers receive for their farm products have generally increased at much lower rates, and in the case of dairy farms have actually declined during seasonal periods over the last couple of years. As farmers say, their plight is having to buy at retail, while selling at wholesale.

1) Dairy. Dairy farms in Westfield are said to be going out

of business more rapidly than other farms due to a larger financial investment not only in land, buildings, and equipment, but in the dairy cows themselves. Moreover, the inability to pay for hired labor, or to find people to perform the very demanding work involved, limits the size of operation an individual farmer or family can run. But the largest single operating cost problem concerns purchased feed, which typically represents as much as 30 to 40 percent of a dairy farm's total operating expense.[1]

Dairy farmers' most common response to the "cost price squeeze" is to increase total milk production by increasing dairy herd size, with hoped for net incomes maintained at at least constant levels. However, larger herd sizes create a need for larger, more expensive equipment and, of course, requires more land. Another response, coupled with that of expanding herd sizes, has resulted from a new attitude found increasingly among dairy farmers toward the economics of milk production.

Over the past couple of decades, the prevailing view has been that higher net incomes could be achieved by increasing milk production per cow. Increased production has in fact been accomplished by feeding each cow larger quantities of feed with more "concentrated" food value. However, the increased expense of the practice, mainly for purchased "feed concentrates", has

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1 A good source of information on recent trends in dairy farming economics is the annual report on the ELFAC system maintained by the Cooperative Extension Services of the Northeastern States.

recently been dramatic. In addition, such forced feeding has been found to reduce the life of a cow by as much as two-thirds, an expensive practice as livestock prices have risen.

Thus, some dairy farmers are beginning to concern themselves less with continually increasing milk production per cow, than with reducing their expenses per cow, which can result in a higher net income per cow. In Westfield all dairy farmers appear to be moving in this direction by increasing the proportion of feed they use that can be grown on the farm -- principally by increasing the production of alfalfa hay -- thereby reducing the proportion of purchased feed. In addition, many farmers appear to have reverted to an earlier practice of pasturing cows during longer periods of the available season. This response, however, compounds the need for more land since, not only is more land for larger herds needed, but the amount required for each cow is obviously increased. Moreover, the type of land that will grow alfalfa successfully is of a more particular type than needed for other kinds of hay.

Virtually all the milk produced by commercial dairy farmers is sold wholesale at prices determined by a federal system of "milk orders" and market supports. Large farmer cooperative organizations typically handle the milk between the farm and market, receiving a considerable payment for doing so which many farmers feel is too high. Thus, another remedy to the "cost price squeeze" experienced by dairy farmers, but beyond the direct

control of individual farmers, would be a reduction of the "spread" between what a farmer is paid for his milk and what the consumer pays.

2) Vegetables. While vegetable operations in Westfield are said to be more stable than dairy operations, due to the lower investment generally required and a more intensive use of land, production costs have increased for labor, equipment, fertilizer, and sprays. Government regulation has also affected costs indirectly by the book-keeping and "bother" required to comply with health and safety labor standards, and by restrictions recently on types of fertilizers and sprays permitted. In the latter case, many standard items have been prohibited, with acceptable substitutes often not available, or if so, more costly than those replaced.

Equally important in their effect on vegetable operations have been changing marketing conditions. As large food chains have tended to dominate the retail food market, vegetable growers wishing to sell wholesale have had to both specialize and increase their crop production in order to guarantee a market by supplying a sufficiently large part of what an entire chain of stores buys. Local growers who can not reach this level of production of single crops are adversely affected by competing Western growers -- mainly in California -- who, after transporting crops East with stops in major cities along the way, will frequently "dump" what remains at the end of the line in Boston. Prices accepted for such produce may be only the cost of unloading it.

The only smaller, local wholesale growers who can compete are those raising a superior crop, such as sweet corn, or a crop too low in retail value to be shipped across the country, such as squash. (Fruit and berries grown locally generally do not meet this kind of competition from out of the region due to their superior quality and freshness in season.)

A general effect of this situation is to oblige vegetable growers selling to wholesale markets to become larger, which of course requires more land. Expanding an operation usually requires as well a higher investment in specialized equipment aimed at reducing labor costs and the growth of a more standardized product. Farmers have also invested increasingly in processing and storage facilities to help them deal more effectively with the chain stores. But with such increased investments, the growers must have constant access to an amount of high quality land sufficient to maintain a needed gross income. In Westfield much of the land used by vegetable growers is rented, with the question of whether it will be available in the future said to be the most critical problem for growers in the city.

An alternative to becoming larger and more specialized is for a vegetable grower to raise a larger variety of crops to be sold at retail prices through his own roadside outlet or a farmers' market. As a concern for higher quality food becomes important to more city people, opportunities for such marketing are likely

to increase. Demand for farm land by such growers may increase accordingly.[1]

4. FARMERS: SONS, DEBT, AND LAND

Dealing effectively with the economic situation in Westfield, and in general, described above is but one condition for succeeding at farming today. Three other conditions of similar importance to the future stability of farming in Westfield became evident through the interviews with farmers in the city. (The situation described here does not apply to Westfield's one tabacco farm, which is owned and operated by a large cigar corporation.)

1.) Sons. Westfield's present farmers have either been in operation for a long time, in some cases decades, or are the sons of older farmers who have taken over the family place and business. All of the farmers reporting taxable personal property to the City Assessors Office in 1975, for example, had reported

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1 As a general comment on vegetable farming, an interesting historic trend in the supply of labor available for work on farms was related by one grower interviewed, suggesting that finding the kind of labor needed for seasonal farm work may become easier in the future. Most seasonal laborers used up until the early 1940's were local high-school students. After World War II, however, parents began to prohibit such work. Thus, starting in the early 1950's, Puerto Rican laborers began to be brought to Westfield for seasonal work. Many of them decided to stay in the area, finding other, year-round work in order to do so. Subsequent crews of imported laborers were found to be less reliable workers and demanding of higher wages. This condition is said to have worsened from the growers' point of view until around 1970, when local high-school and college students began again to look for summer work on vegetable farms. The local student laborers are said to have improved the growers' situation considerably because farmers have found them to be fast learners, hard workers, and honest.

such property in 1965, or were the sons of farmers reporting in 1965.

On most of the farms visited during this study, an elder farmer had already brought one or more sons into the farm business as a partner. In all of these cases, an enthusiasm for staying with the farm into the future, regardless to obstacles to doing so, was high. In cases where there were no children available or interested in carrying on, the farmers saw no future for their operations beyond their retirement. No one could pay the price they would ask for their farms and make a go of it financially. Yet on the farms where the children had become partners, this financial obstacle had been overcome.

Farmers are thus willing to transfer their farms to family members who will continue the farm's operation, with financial arrangements making this possible. Other farmers appear to feel a need to sell at current market real estate prices, which another farmer could not pay.

Thus Westfield's present farms with a younger family member available to carry on the business will likely continue in operation. Under present market real estate conditions, however, other farms will in time surely go out of operation.

2) Debt. All of the farms visited in Westfield were free of any long-term debt for land, and a few had little or no short-

term debt for operating expenses.[1] The less a farmer has to pay on loans, the greater is his net income and thus his ability to deal with the economic problems of production referred to above. The lack of significant long-term debt among Westfield farmers is certainly one of the reasons farming remains at the level it does in the city.

The debt-free land holdings are due to the farms having been in their current operators' families for so long. This condition is presumable true for farmers throughout the city, since only one farm property has been sold as farm property in the city to an individual farm operator since 1955.[2]

Most of the farmers interviewed believed that people other than members of present farm families would enter farming, and could make a go of it, except that they could not pay the carrying charges of buying farm real estate at current market prices. So, again it would appear that the future of farming in Westfield will depend in large measure on whether present real estate market conditions can be circumvented, either by favorable financial arrangements within a farm family, or by some other means.

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1 The county office of the U.S. Department of Agriculture, Farmers Home Administration does not have a single outstanding loan in Westfield for either long-term real estate debt, or for short-term operating debt.

2 In addition, the city's single tobacco farm previously owned by a private operator was sold in 1974 to a cigar corporation.

3) Land. Nearly all of the farmers interviewed are renting substantial acreages of crop land. A few have been renting land for years, others only more recently as they have expanded their operations. But the reason all of them who rent land do so today is that the land is either not for sale, or if so, for asking prices much higher than could be paid out of the agricultural income produced by the land. As will be discussed below, this situation has several serious drawbacks from an active farmer's point of view.

Thus, current farmers, operating otherwise successful businesses, are handicapped by a real estate market which sets values for farm property in relation not to its agricultural productivity, but to the highest price the market will bear for whatever use.

5. FARM LAND OWNERSHIP

No exact information is available for Westfield on how much land is owned by farmers generally or by specific type of farm operation, or how much is rented by farmers from non-farmer owners. It is apparent, though, that three groups in Westfield own significant farm land acreages: (i) part-time farmers, who gain their primary income from non-farm sources; (ii) full-time commercial farmers, earning their total or primary income from their farms; and (iii) owners of farm land whose only "farm income" comes from renting their land to actual farmers.

Of the land owned by part-time and full-time farmers, probably 85 percent is owned by full-time farmers. Both groups typically

own both wooded and open acreages. Generally, a larger proportion of a vegetable farmer's acreage would be open, tillable land. In the city overall, we estimate the land use composition of acreage owned by full-time farmers to be: 55 percent wooded; 15 percent in barn-yards, building sites, farm roads, and so forth; and, 30 percent in tilled or pastured cropland.

We estimate that the 30 percent of total acreage owned by commercial farmers that is cropland represents, however, only about 60 percent of such land the farmers actually use. Thus, some 40 percent of the most productive land used by an average Westfield farmer is owned by someone else, usually not an active farmer. County agricultural extension agents say that as a rule of thumb, vegetable farmers rent half the crop land they use, while dairy farmers rent one-third of their crop or hay land.

The non-farmer owners of farm land are apparently a mixed group, with mixed intentions regarding their property. Most are said to be retired farmers or the heirs of former farmers uninterested themselves in farming. Some owners have chosed not to sell their property to anyone, simply because they want to keep it or want to be sure it will continue to be used as they wish. Other owners are said to be holding the land until they can find buyers willing to pay "top dollar" for it. In the meanwhile, these owners are willing to rent the land to a farmer simply to gain some cash return from it.

The non-farmer owners hoping to sell at the highest price possible are said to be generally the heirs of former farmers. With several people in many cases having a claim to a single property -- people who often do not reside in Westfield or feel a concern for the place -- the overriding desire is to get as much money as possible out of the property. Moreover, stories were recounted through interviews in Westfield of complicated legal entanglements among heirs entailing very high legal fees. Being able to pay such fees out of the proceeds of a property sale, while having something left to distribute among the heirs, is thus another reason to sell at only the highest price possible.

6. RENTAL LAND

Agricultural statistics for Massachusetts and Hampden County indicates a trend toward increased use by farmers of rented land. The trend is more pronounced in Hampden County than on an average in the Commonwealth, and apparently even more so in Westfield than in the county. Thus, the proportion of active farmers in Massachusetts who used rented farm land increased between 1954 and 1969 from fifteen to 24 percent, while in Hampden County the proportion of such farmers increased over the same period from sixteen to 30 percent.[1]

In Westfield, the use of cropland separate from that available on the "home farm" is in part an historic pattern. In the

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1 Calculations for Massachusetts and Hampden County are based on U.S. Census of Agricultural information.

Wyben section of the city, for example, farmers traditionally maintained their farm house and outbuildings in one area, out of an aesthetic and social concern, while cultivating fields in a separate "plains" area of more productive land. Farmers in the past would also exchange use of fields for periods of years, in order to conserve their lands by rotating the production of one type of crop to a field where a different crop had been grown.

Today, however, farmers rent land essentially because they can not buy it. Some farmers who have rented land for a long period originally did so because paying rent was cheaper than paying the morgtage and taxes on purchased land. But now, these farmers and others renting land in order to expand operations, do so because the additional land they need is not available at prices their farm income could pay.

While rents charged for farm land are said to have been generally reasonable, they can represent a significant cost. On a yearly, per acre basis, rents are reported to be: from $10 to $15 for land used in dairy farming (or a lower dollar figure plus a gratuity, such as free maple syrup or a garden plowed); $30 to $50, but occasionally higher, for land used in vegetable farming; and, $75 to $100 for land used in tobacco farming. The range of price is influenced by the quality of the land, the size of a parcel, and the distance of a parcel from a farmer's primary operation.

However, reasonable rents, where they occur, are far outweighed by several bad consequences of needing to depend on rented land.

1) Insecurity. Most of the land rented by farmers may be sold, if a buyer is found, into another use. Most rental "leases" are "by word of mouth, from year to year." Thus, a farmer can not count on the land he needs to be there in the future. Every farmer interviewed who rented any sizable amount of land placed his anxiety about its future availability at or near the top of his business concerns.

If rented acreage a farmer has been using is sold and he can not find other land to rent, he will lose a needed return on his non-land farm investments in machinery, livestock, or other overhead items. If he is forced to sell his farm because enough rental land can not be found to support his non-land investment, the value of his farm has been cut in the eyes of a potential buyer for the same reason the owner feels obliged to sell.

Moreover, as farm land east of the city has been lost to urban development, Westfield farmers located in the eastern part of the city are competing increasingly not only with potential developers for use of rented land, but with other farmers, which can cause the rents paid to go up.

2) Inefficiency. Most of the rental land available is in small plots, often scattered some distance from a farmer's primary operation. Thus, farmers need to travel varying distances -- six miles was the furthest mentioned; two or three miles seems the

norm -- in various directions, which represents a considerable cost in: time spent in inefficient work patterns and of travelling with slow moving farm machinery; wear on expensive machinery; and high fuel costs. These costs simply add to already expensive, normal production costs.

In addition, as trespass on fields and vandalism to crops and equipment have become more pronounced, particularly in areas of the city near built-up sections, farmers are less able to keep watch on their rental fields. Vegetable growers told, for example, of deciding to grow certain crops on their most distant fields because these crops were harder to damage or steal.

3) Poor conservation practices. Because the land rented by a farmer is always subject to being sold with little forewarning, farmers are reluctant to invest in proper maintenance or improvement of the fields they rent. Thus productivity is less, with its attendant cost to the farmer. And over a period of years, restoration of a field to a minimum level of productivity would entail a considerable expense. The field may eventually be lost to farming merely because of poor conservation practices.

If, on the other hand, a farmer invests in the proper care of rented fields, he risks losing this investment if the field is sold for another use. In addition, one farmer told of how he obtained use of a field at a reasonable rent because its owner thought it of no particular agricultural value; yet,

when the farmer increased the field's yield several-fold by proper care of it, its owner demanded a higher rent upon realizing its actual potential.

Where farmers have a choice, they will improve their own land rather than rented land for growth of their most productive crops. Dairy farmers, for example, would prefer to grow alfalfa on their own land. But since inherent soil conditions of their own land may preclude its growth, they have to choose between improving someone else's land to gain a maximum yield of alfalfa, or forego the economic advantage of feeding this crop in lieu of purchased feed. Similarly, vegetable growers use land in such an intensive manner, with proper fertilization a necessity, that they have no choice but to invest in a basic maintenance of rented land, with its attendant financial risks.

7. REAL ESTATE VALUES: ASSESSED, MARKET AND AGRICULTURAL

1) Assessed valuations. In Part 3, we will discuss the assessed valuations of various categories of real estate in Westfield. The assessed valuation of property owned by farmers in 1975 represented less than one percent of the city's total real estate valuation. Similarly, the assessed valuation of the category identified as "vacant land" represents only 3.4 percent of the total value. This category would include farm land rented by farmers, as well as all other undeveloped land in the city. In both cases of farm and vacant-land real estate,

their share of total values had declined over the period 1967-1975. The low valuations are consistent with the philosophy and practice of the present and former City Assessor toward assessing farm land.

Their practice has been to assess actively farmed property on the basis of its agricultural productive value, not on the higher value it would have in some other use. This practice is consistent with their argument that: farm property has no value higher than its agricultural value, unless both a willing seller and a willing buyer of the property exist, from which situation a higher valued use would in fact result. Even though a non-farmer may be willing to pay a higher-than-agricultural value for farm property, unless the owner is willing to sell, the higher value is not real. Conversely, even though an owner is willing to sell at a higher-than-agricultural value, until someone willing to pay that value appears, the value is unreal.

The assessors argue further that reported high "market" values for farm property are maintained not so much by offers to pay such values, as by a prevalence of farm land owners who would not sell for less. "Since So-and-so down the road has sold out at $2,000 an acre," the assessors' account of a farm-owner's reasoning goes, "I won't sell for less." The assessors say, however, that the price So-and-so received was an exception, not likely to be seen again for some time.

One result of the assessor's approach has been a reasonable level of property tax charges on farm property in Westfield. Of all the Westfield farmers interviewed, only the tabacco grower felt the city's property tax on farm property was too high. Accordingly, no one in Westfield has applied for agricultural property tax relief under Chapter 61-A, the Massachusetts law providing it.

If the assessors' view of the real estate market is correct, however, then farmers themselves are in large part responsible for their inability to buy farm land. For it is they, together with other, non-farmer owners of farm land, who will not sell at agricultural values, even when there is no other market for their land. Our view is, however, that while the effect of the assessor's practice is justifiable out of a concern for protecting actively farmed property, and while on a parcel-by-parcel basis their argument seems theoretically sound, looking at the city as a whole over a period of time, their argument is questionable.

Thus, the assessors' argument ignores both the transfer of substantial farm acreage out of farming into urban uses in past years, as well as the "potential" higher-than-agricultural values which farm property generally has for future urban development.

"Potential" value is, of course, difficult to assess. As our discussion in Part 3 shows, Westfield has an ample land area suitable for urban development without such development needing

to use currently farmed land. On the other hand, unless deliberate measures are taken to prevent its development, farm land is likely to be in ever greater demand for non-farm uses. Farm land owners wanting to sell at "top dollar" would seem well advised to "wait and see", as in fact they are doing.

2) Market values. The Westfield farmers interviewed were asked to cite prices paid for farm property they were familiar with in their neighborhoods. We compared these to prices the city assessors gave on sales, and to a real estate agent's knowledge of both sales prices and market demand. The prices cited by the farmers, the assessors, and the real estate agent were remarkable similar.

Since most farm property in Westfield is zoned in a so-called agricultural district permitting single-family residential use, this use would generally set the upper limit to a potential, non-agricultural value. Thus large tracts of farm land, in 100 acre or-so parcels, have been sold to residential developers for $1,000 to $2,000 an acre. Such acreage would typically contain wood land as well as open, tillable fields. Single lots, for use as individual house sites, of open farm land with road frontage,have sold for $7,000 to $12,000 per acre, depending on location in the city. Such sites are said to be in large demand, even if there are presently few "willing sellers."

Most of the flood plain area of the city has been determined by

the U.S. Soil Conservation Service to be unsuitable for on-site sewage disposal, and thus difficult or impossible to develop for a single-family, residential use. Most farmers interviewed regarded the flood plain area as generally having no real estate value other than for an agricultural use. Yet when specific sites in the flood plain were referred to, several were regarded as developable for residential use. More important, however, is the market potential of this area for commercial use, where exceptions to zoning prohibitions of such use could be obtained. Thus, in the area of the flood plain where the filling of sites can overcome its physical limitation to development, parcels have been sold recently for as much as $40,000 to $50,000 an acre. Other parcels in the flood plain, where physical obstacles are harder to overcome, have sold for $4,000 to $5,000 an acre.

The question of how much land would have such "potential" values as these for residential or commercial use would depend on how far back in time one looked for sales of comparable properties, or how far into the future one looked for likely development demand.

3) Agricultural values. The Westfield farmers and county agricultural officials interviewed were also asked their opinion of the agricultural value of Westfield's farm property. The type of farm use to be made of a parcel would be the main determinate of its value. Another important consideration affecting all types of farm uses would be whether a given parcel could be

made a part of an on-going farm, and how much debt the farm was already carrying. If an entire farm were to be bought outright, with a long-term debt entailed, much less per acre could be afforded. Finally, land would have a higher or lower agricultural value for any type of farm use depending on its inherent quality, how well it had been maintained as farm land, size of parcel, and if absorbed into an on-going farm, its location in relation to the farm.

Land to be used in dairy operations would have the least agricultural value, with a range of $150 to $300 per acre, depending on the considerations listed above. Under ideal conditions, $500 per acre would be "top" for dairy land.

Land to be used for vegetable production would have a higher value, with a range of from $500 to $1,000 per acre. The most a vegetable grower could pay under ideal conditions would be $1,500 per acre. The specific type of crop grown on the parcel would be especially important in considering what could be paid.

Land to be used for tobacco farming would have the highest agricultural value of around $1,000 per acre. Since such land is also equally desirable for vegetable production, competition between tobacco and vegetable growers has occured recently in Westfield for the same parcel, with the tobacco grower able to pay a higher price.

A further consideration of the value of land not recently farmed is of how extensively it would need to be renovated. While cutting brush from a parcel would be a fairly minor expense, having to use a bulldozer to remove trees, or having to drain the parcel, could cost from $500 to $1,500 per acre. Such a cost could be offset somewhat, however, by selling timber from the parcel.

Despite the expense of clearing wood land, two farmers interviewed told of recent efforts to begin converting wood land they own to crop land, in order to reduce their dependency on rented land.

Chapter 2 - Preserving Farm Lands: Public Purchase of Their Development Rights

The purpose of undertaking this study has been to find out how the proposed Massachusetts program to buy development rights in farm property might work out in one community. The discussion in this chapter thus proceeds from interviews held with Westfield farmers and county agricultural officials as well as from the city's land use situation described in the following section of this report.

1. A PROGRAM TO BUY DEVELOPMENT RIGHTS IN FARM PROPERTY

As presently conceived by the Massachusetts Department of Agriculture, the farm land preservation program would, in simplified form, contain the following features:

·Owners of property eligible to have their development rights purchased by the public would not be obliged to sell them.

·An owner of eligible property choosing to sell the development rights would be paid a sum of money for them, determined by the difference between the property's agricultural productive value and its market real estate value. The right to develop the property for a non-agricultural use would thus have been removed from the "bundle" of private property rights remaining in the property.

·Public involvement in determining either the value or

or use of the property would cease at this point.

·The value of the property realized through subsequent, private sales would be based on the market demand for farm real estate which could not be developed for non-agricultural uses. Theoretically, the property would be in demand mainly for a bona fide agricultural use, with the property's market value determined therefore by its agricultural productive value.

·Administration of the program would rest primarily with municipal officials, under a general supervision of Commonwealth officials.

-Commonwealth officials would establish guidelines for types of property eligible to have its development rights purchased through the program. First priority eligibility would be given to farm properties in current agricultural production. Second priority eligibility would be given to other lands considered by soil scientists to be most suitable for farming.

-Municipal officials would determine the specific farms and other properties to be eligible under the program.

-The price paid for development rights would be negotiated between municipal officials and the property owners concerned.

-Municipal governments would make initial payment for the development rights, with a subsequent 100 percent reimbursement by the Commonwealth of Massachusetts.

2. COMMUNITY PLANNING

City people interviewed through this study expressed a variety of reactions to the idea of preserving farm land for an agricultural use in Westfield. One view is simply that farms should be maintained for their own sake. Another view regards the preservation of farm land for an agricultural use as a way of preventing urban growth in the city from continuing at its recent pace. Still another view is that if preserving farm land were to curtail continued urban expansion, such an effect would be bad for the city and should be opposed.

From our analysis of Westfield's land use situation, it seems clear that farm lands could be kept available for farming, with ample land area suitable for development left for continued urban expansion. However, were present real estate market conditions to hold sway, an accommodation of both farming and urban growth would be difficult, likely creating social tensions in the city.

Our view is that the preservation of farming and providing space for urban life are values of equal social importance. Devising a land use program that would enable a few people to take actions contrary to the interests of the overall community would thus be undesirable in our opinion.

We would suggest, therefore, that a plan to preserve farm lands follow from a community plan for the accommodation of both farming and urban development. In Westfield this would appear to require at least: (1) an identification of land areas where farming is to be encouraged; (2) an identification of other lands where urban development is to be encouraged; and (3) the development of a public investment plan to facilitate the desired land uses. Were the proposed Massachusetts farm preservation program enacted, such a public investment plan could in turn contain at least: (1) a schedule for the purchase of development rights in farm property, and (2) a long-range capital budget providing for the transportation, public utilities, and other municipal services required to facilitate urban development in the non-farm areas deemed appropriate for this use.

3. BENEFITS TO FARMERS

The farmers interviewed in Westfield generally held a cautious but positive attitude toward the farm preservation proposal. While most felt they would want to "wait and see" how it might work out in practice, nearly everyone felt the program could be beneficial to them.

Among Westfield's active farmers, the critical question is whether owners of the land farmers now rent would sell their development rights under the program. If the owners of such land did sell their development rights, doing so would

presumably make the land now rented by farmers available to them either to buy at an agricultural value, or to rent on a basis of written, long-term leases. In either case, the problems now associated with farmers' dependency on rented land could be overcome. Current farmers could more easily expand operations if need be; parcels of land could be aggregated in more desirable locations; more productive land conservation practices could be undertaken without financial risk; more efficient use of time and equipment could result; and, most important, future access to needed land acreages could be looked to with confidence.

Under these conditions, most farmers believed they would be willing to sell the development rights in their own property. Doing so would provide them with money to invest in their farms, by buying additional land or by making other business investments.

Most farmers believed as well that people not now in farming would be able to enter farming were present owners of farm property to sell their development rights. Not only would farm property be available on the real estate market as farm property -- a condition that does not now exist -- but the lower expense of buying an entire farm could be managed, despite current farm production economic difficulties. This prospect was qualified, however, by other considerations to be discussed below.

Finally, even if all the land most suitable for agriculture in the city were not put to an immediate agricultural use, most farmers believed the land should be kept available for a future use. A future demand for its agricultural use was seen as inevitable as energy resources become scarcer and increased local food production becomes more urgent.

4. COST OF DEVELOPMENT RIGHTS

In Chapter 1 we discussed both the market and agricultural values of Westfield's farm properties. The cost of all the development rights that might be purchased in Westfield can not be estimated short of a thorough agricultural and market real estate assessment.

It is apparent, however, that farmers have a realistic sense of the value of their property, both as to its agricultural value or potential value for a non-agricultural use. The fact that a farmer may say he would sell his property for only a given high figure is a hedge against a presently uncertain agricultural future, as much as it is his belief that he could actually get such a price.

Farmers are dependent on their current operations for their livelihood. Most have been, moreover, all their lives. Were they to sell their farms and embark on an entirely new way of life, they feel they would need to receive the highest

price for their property possible. Such a sum of money would not only help them in some new endeavor, but would represent a compensation for a lifetime of hard work at generally low incomes. Farmers also feel entitled to a return on their financial investments, as do other business people.

On the other hand, were farmers to sell the development rights in their farm property, and thereby obtain a more secure agricultural future, every farmer interviewed felt he would be willing to accept a considerably lower price than otherwise. It should be emphasized, though, that this attitude would prevail only if the sale of development rights by farm land owners was wide-spread enough that an individual farmer could in fact obtain access to the entire land area needed in his operation. It should be emphasized as well that this attitude is that of active farmers. Non-farmer owners of farm land are said generally to be interested only in receiving the highest market price possible for their land, and presumably would insist on a comparable payment for their development rights.

One Westfield farmer suggested that if the Commonwealth were to enact the farm preservation program, land developers would rush to buy the most easily developed farm land, offering prices which would be hard to refuse, before a land owner

sold his development rights to the public. Several farmers also suggested that some land owners might be willing to accept bogus private offers to buy their property at high prices, in order to influence what they could receive for their development rights.

To assure a continuation of the apparent good will of farmers toward a farm land preservation program, would obviously require that opportunities to exploit the program be safeguarded against.

5. PROPERTY TAXES

Were farm land owners to sell the development rights in their property, property taxes based on market value assessments would then theoretically reflect the land's agricultural use value. Westfield farm land owners are already taxed on a farm use basis, with the city's assessed valuation on actively farmed real estate constituting less than two percent of the total assessed valuation of all real estate in the city. Thus, the purchase of development rights in Westfield's farm property would result in neither a tax saving to farmers, nor a shift of the city's property tax burden onto owners of non-agricultural real estate.

6. RESERVATIONS AND ISSUES

The Westfield farmers interviewed expressed several reservations about the program, and raised issues that would need

attention were a program of buying development rights implemented.

1) Who decides? Nearly every farmer was skeptical of the ability of a government program to operate to their benefit. Farmers have been affected by government regulations and programs longer than virtually any other business group in our economy. Because of this, as well as being owners of large land acreages, many have been subjected to seemingly arbitrary government actions with effects seen as contrary to their interests. They simply doubt that a government could run a development rights program without bungling it.

On a scale of lesser to greater evils, however, a municipal government is seen as likely to be more sensitive to real conditions and more responsive to farmers' interests than a state government. (Any suggestion of federal involvement would be out of the question.) Yet for an agency of municipal government to be found acceptable, it would have to be directed by a governing body with membership including active farmers as well as others knowledgable in the technical areas concerned -- not merely well-intended but possibly ill-informed citizens.

2) Freedom. Several farmers were also concerned in general about possible infringement of their "freedom". This concern ranged from a fear of being obliged to sell their development rights if they didn't want to, to the

effect of selling their development rights on the remaining rights in their property. Trespass on farm property is, for example, now a serious problem for several farmers, resulting in vandalism of equipment and buildings, soil and crop damage, and quantities of trash that injures livestock and causes equipment breakdowns. Were the 'public' to buy a farmer's development rights, would that give city people a sense of even greater freedom to use the farmer's property as they might wish?

3) Eligible property. Many questions were raised as to what kinds of farm property should be eligible to have its development rights purchased.

Farmers generally felt that the most valuable farm resource to be protected would be entire farm enterprises now in operation, including: all the acreage required for an economic operation; both tillable and pastured land, in the case of dairy farming, as well as space sufficient to store and spread manure without causing water pollution; wooded "buffer" areas protecting water sheds and open fields from erosion. The least valuable farm properties would generally be small sized parcels, isolated from other farm lands, surrounded by intensive urban uses.

However, another equally important concern was with protecting

those acreages first which farmers now rent from other owners, and those which are under the greatest real estate demand for non-agriculatural use. Much of the land farmers rent is in small, isolated parcels, often next to built-up areas, as well as often in demand for other uses. Thus, a set of criteria concerning which properties should be made eligible before others under a development rights program would need to be flexible and under the administration of people who know the local agricultural and real estate situation.

Other considerations discussed by Westfield farmers include:

·soil quality and potential crop yield;

·size of parcels (a minimum size suggested ranged from five to fifteen acres);

·contiguity of parcels with other farm lands, either those making up currently active farms or owned by non-farmers;

·expense of renovating fields; and,

·suitability for use by part-time farmers, or as community gardens.

We would also raise the question of whether "abandoned fields" recently farmed, but not located in areas determined by soil scientists to have only slight or moderate limitations for farming, should be considered eligible. In Westfield, the largest proportion of abandoned fields are located in these areas.

4) Adjacent uses. Problems cited by farmers using land adjacent to built-up areas, in addition to those of trespass mentioned above, are the objections of city people to farm smells -- such as of cow manure, fertilizers, and sprays -- and the damage to farm land resulting from water running-off residential or commercial sites. Most serious run-off problems result from residential subdivisions of hillsides without proper storm sewers or other means of water control.

It was thus suggested that farm acreage designated for protection under a development rights program be further protected by creation through the city's zoning authority of a "buffer" zone, where possible, surrounding the farm acreage. Only low density development would be permitted within such a buffer zone, with particular care required that surface drainage be diverted away from the farm lands.

5) Use of farm land by bona fide farmers. As the Massachusetts farm land preservation program is presently written, no restriction would be placed on who could buy farm property after its development rights had been sold. All farmers interviewed expressed reservations, however, with this aspect of the proposal.

Their concern generally was with the purchase of farm property by individuals or institutions not earning their

entire or primary income from farming, with two possible adverse effects from the farmers' view. One might be that market values would once again be driven above the reach of people earning their total living from farming. Such a situation would inhibit especially the ability of new people to enter farming as their sole occupation. Secondly, while non-farmer buyers of farm property might want to continue its agricultural production by hiring someone to run a farm business, such a tenant farmer arrangement would be undesirable. The farmers interviewed regard their farms very much as "their" operations, and would like to see the tradition of owner-operated, family farms perpetuated.

Thus, for example, individuals earning high incomes from urban employment might wish to buy a farm which had its development rights removed, simply as a way of acquiring rural property to live on. If such an individual wanted the farm enough, he most likely could out-bid most full-time farmers. However, were such a buyer to wish or need to continue the farm's production, he would have to hire someone to run the farm for him.

It was also suggested that individual, bona fide farmers might be out-bid for farm property by individuals or corporations with only secondary interests in farming, in order to create business losses and thus tax shelters. It was said that this situation has already occurred with tobacco farms in the area.

6) Compulsory or voluntary? It is clear that the success of a farm land preservation program in Westfield would depend on acquiring the development rights in a substantial acreage of farm land, from people with a diversity of real estate interests. To reconcile a farm land preservation program with urban development interests in the city, it would appear to need as well to be coordinated with a program for directing urban growth more aggressively than undertaken in the past. An approach that might seem most effective would, therefore, delineate farm areas to be preserved, with all non-agricultural uses restricted and with land owners compensated for a public taking of their development rights. Yet, it is also clear from interviews with Westfield farmers that a farm land preservation program would need to allow them to choose to sell their development rights -- not be obliged to do so.

The Massachusetts Department of Agriculture has thus pursued a more prudent course of devising a voluntary program. At the moment it appears that many farm land owners in Westfield would be willing to sell their development rights in order to assure their own future as farmers. The question arises, however, of whether in fact many of these farmers might have no development rights to sell.

Much of Westfield's best farm land lies in areas of a flood plain said to have no development value. The current real estate, urban development situation in the city is uncertain,

both as to how much development will occur in the near future, and where. Moreover, if urban development were diverted away from farm property, could such property be said to have development potential?

Thus, it might be found on a parcel-by-parcel inspection that many of Westfield's farm properties have no market real estate value beyond their present agricultural uses. Accordingly, were farmers told they could not sell their development rights today, but would have to wait until a non-agricultural demand for their property was manifest, such farmers might be discouraged -- having their suspicions of yet another "government program" confirmed. The objective of the program of restoring confidence in the future of farming could well have been thwarted.

By the time an actual development demand for such farm property were manifest, more farms would have likely gone out of business, fewer remaining farmers might be willing to sell their development rights to the public, and the cost of buying those development rights offered would be much higher.

Inherent in the Massachusetts proposal to preserve farm lands is an intent to move from a strictly free market system of

allocating agricultural land uses, to one where the public good could be better served. Making an effective transition from one system to another will require a fine balance between reliance on government intervention in the present system, and as much continued reliance as possible on the decisions of private individuals. The Massachusetts program would entail a prudent minimum of government intervention. Yet another step toward assuring its purpose might, with equal prudence, include a flat, minimum payment to all farm land owners wishing to sell their development rights, even if such a payment would not reflect actual market conditions. Higher payments for development rights in property with higher market values could still be made as proposed.

We do not suggest that this, or some other idea, would be the best solution to the issue. But we do feel the issue is of enough importance to emphasize, for we too would like to see the proposal enacted, and a farm land preservation program succeed.

PART III

LAND USE IN WESTFIELD - A DETAILED LOOK

Chapter 1 - Urban Lands and Development

Westfield has long been a bona fide city, with a self-sustaining industrial economic base and complementary commercial and service establishments. The community's two- and three-hundredth birthdays -- in 1869 and 1969 -- were both occasions, for example, for citizens to celebrate Westfield's long-time industrial and commercial vitality. Between 1850 and 1910, Westfield's population had increased three-fold from 4,000 to 16,000 residents. By this time, the community's central area had been laid out and developed in typical turn-of-the-century, New England fashion: a well-constructed, high density composite of stores, offices, and public buildings, with manufacturing plants close by, and adjacent residential neighborhoods made up largely of single-family dwellings on pleasant but small lots by today's standards.

From World War I until into the 1930's, Westfield's population growth was more moderate, with an actual decline in residents between 1930 and 1940 of five percent. The city's 1940 population was 18,749.

While some residents hoped after World War II to retain Westfield's outlying character as a "town", still others sought a renewed expansion of industrial, commercial, and residential building. Aided by the coming of the Massachusetts Turnpike and an expansion of the city's municipal airport, the city grew indeed. Low-rise industrial plants and shopping centers, lining the major highway entrances to the central city, have grown up over the past couple of decades in Westfield as they have around older downtown centers throughout the country. While this expansion in Westfield has been significant, residential growth has been even more demanding of additional land areas.

The land use map accomparying this report, illustrating conditions in 1972, indicates the older high density and more recent low density development patterns for industrial and commercial, and residential land uses.

1. POPULATION AND DENSITY

Westfield's population has increased substantially since the 1940's, growing from 20,962 in 1950 to 31,433 in 1970, and to an estimated 34,024 in 1975.[1] The 50 percent rate of population increase in the city between 1950 and 1970 was more than double that experienced in Massachusetts as a whole, or in Hampden County. Comparative rates of population

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[1] U.S. Census of Population; 1975 estimate by Massachusetts Office of State Planning.

increase are shown in Table No. 2. This population increase has resulted in a population density based on Westfield's total municipal land area that is approaching average population densities for Massachusetts and for Hampden County. Westfield's population density in 1970 was 674 people per square mile, compared to 705 for Massachusetts and to 729 for Hampden County. Comparative densities over the period 1950 to 1970 are shown in Table No. 3.

While Westfield is often cited as having an extraordinarily large land area with which to accommodate expanding urban land uses, these figures on population increase and density suggest that the city's large land area might be regarded mainly as a statistical oddity. More significant is the amount of space used per person as the city's urban area has grown.

Table No. 2

Rate of Population Increase

	Percentage Increase		
	1950-1960	1960-1970	1950-1970
Massachusetts	+10	+11	+21
Hampden County	+17	+ 7	+25
Westfield	+26	+20	+50

Source: U. S. Census

Table No. 3

Population Density of Total Land Areas

	People Per Square Mile			Percentage Change
	1950	1960	1970	1950-1970
Massachusetts	581	638	705	+21
Hampden County	584	682	729	+25
Westfield	449	564	674	+50

Source: U.S. Census.

2. DENSITY OF URBANIZED AREAS

Thus another measure of the demand of urban development for space is in a comparison of numbers of residents to the actual land area used for urban purposes -- in contrast to total land areas. From such a comparison, Westfield's population is seen not only as growing rapidly in absolute terms, but as using more land area per person in doing so. Table No. 4 shows the number of residents per acre of land in urban use (industrial, commercial, transportation, and residential) in 1952 and 1972.[1] As this table indicates, a decreasing number of residents are being accommodated per acre of urban land in Westfield than on an average in Hampden County, although the general trend toward fewer people per acre of urban land is the same for both the city and the county.

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[1]Urban land areas from MacConnell, William P., Remote Sensing 20 Years of Change in Hampden County Massachusetts, 1952-1972, Research Bulletin No. 628 (Mass. Agricultural Experiment Station, Univ. of Mass., Amherst, Mass., July 1975). MacConnell's land use mapping and analysis will be discussed in Chapter 2.

Table No. 4

Population Density of Urban Land Areas

	People per Acre		Percentage Change
	1952	1972	1952-1972
Hampden County	11.3	7.1	- 37
Westfield	8.4	4.8	- 43

Source: U.S. Census and MacConnell.

3. CATEGORIES OF URBAN LAND USE

Table No. 5 shows the percentage of total land area in Westfield and in Hampden County devoted to major categories of urban use in 1952 and 1972, together with percentage increases in areas of use between these two years. The table also presents calculations for wooded lands and open agricultural lands, the latter including both actively farmed and abandoned fields. Agricultural land uses will be discussed in detail in Chapter 2.

As Table No. 5 indicates, land in residential use occupies more of the city or county's total land area than do other urban uses. While each category of urban use in 1952 occupied similar proportions of total land area in both the city and county, by 1972 each urban use had in Westfield expanded to a larger proportion of the city's total land area than they had of the county's total land area. The result in 1972 was that Westfield's urbanized area, expressed as a

Table No. 5

Land Uses

	Westfield			Hampden County		
	Percentage of Total Land Area		Percentage Change	Percentage of Total Land Area		Percentage Change
LAND USES	1952	1972	1952-1972	1952	1972	1952-1972
Urban						
Residential	4.9	13.8	+ 184	5.4	11.4	+ 111
Industrial/Commercial	.8	2.5	+ 196	1.0	1.7	+ 76
Transportation	1.2	3.3	+ 183	.4	1.5	+ 240
Open Public	1.3	1.9	+ 43	1.3	1.5	+ 21
Total Urban	8.2	21.4	+ 162	8.1	16.1	+ 100
Wooded	57.0	49.3	- 14	67.8	66.0	- 3
Open Agricultural	30.8	21.7	- 29	20.5	12.0	- 42
Other	4.0	7.6		3.6	5.9	
TOTAL	100.0	100.0		100.0	100.0	

Source: MacConnell.

proportion of the city's total land area, was 33 percent larger than the urbanized area of the county as a whole.

Thus,in general, use of land for urban purposes grew over the twenty year period at a more rapid rate in Westfield than in the county as a whole, with increased use of land for residential purposes accounting for the greatest amount of urban expansion. Correspondingly, the city had in 1952 proportionally less wooded land than had the county and has lost more since then, while the city had proportionally more open agricultural land than had the county and has lost less than has the county.

4. ASSESSED REAL ESTATE VALUES

Based on Westfield Assessor Office records, Table No. 6 shows the assessed values of major categories of real estate in the city expressed as proportions of Westfield's total assessed valuation, for 1967 and 1975, and the percentage change in these categories between the two years.[1] The information in this table further indicates the increasing significance of residential property in the city in relation to all types of real estate.

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[1]Our calculations are based on unpublished Assessors Office information; comparison by category of real estate to years earlier than 1967 can not be made due to a different set of categories then used.

Table No. 6

Percentage of Total Assessed Valuations

	Westfield Percentage		Percentage Change
	1967	1975	1967-1975
Residential			
Single-family	51.9	54.8	+ 5
Multiple-family	11.5	15.6	+36
Total Residential	63.4	70.4	+11
Commercial			
Central Business District	11.6	6.7	-42
Outlying Areas	5.4	6.5	+20
Total Commercial	17.0	12.6	-26
Industrial	14.9	12.7	-15
Vacant Land	3.8	3.4	-11
Farm*	.9	.8	-11

*does not include value of land rented by farmers.

Source: Westfield Assessors Office

Residential property makes up the major and an increasing share of Westfield's total assessed real estate value. While the value of single-family housing dominates very substantially the value of multiple-family housing in Westfield, the higher rate of increase in the share of total value made up by multiple-family housing is noteworthy, indicating that this type of housing is on the increase. Of note as well is the increasing share of total values made up by commercial real estate lying beyond the central business district, while the share of total values made up by commercial and industrial property generally has declined. The significance of the very small proportion of total values made up by farm property and "vacant land" was discussed in Part II.

5. HOUSING CONSTRUCTION

As a result of the recent economic recession, construction of new housing has of course slowed throughout the nation in the last couple of years. Table No. 7 shows the number of residential building permits applied for in Westfield from 1965 through 1974, evidencing a housing construction slowdown in the city since a peak of such construction in 1971. Also shown in this table is the increasing average cost for materials and labor alone of new residential building from 1970 through 1974.[1] Not indicated in this average cost is a

[1] Records of the Department of Community Affairs, Commonwealth of Massachusetts, and 1974 Housing Element, Lower Pioneer Valley Regional Planning Commission (Lower Pioneer Valley Regional Planning Commission, West Springfield, Mass., no date given), p. 7.

rapid rise in land values -- said to be on an average double today in Westfield what they were eight to ten years ago.[1]

The figures in Table No. 7 are for entire "residential buildings", not "individual dwelling units". Thus, the decreasing number of buildings and their increasing average cost most likely indicates not only a general housing construction slowdown due to rising costs, but as well an increased construction of multiple-family dwellings -- one way builders have attempted to off-set the high cost of constructing or buying new single-family dwellings.

6. SUMMARY

The trends indicated by the figures presented above reinforce descriptions of changes in Westfield given by individuals in the city familiar with urban development patterns over the past couple of decades. Their account is of a significant amount of industrial expansion during the 1950's and 1960's and of increased construction of housing occupied by the families of new industrial employees, together with a probably more significant construction of housing occupied by the families of people who commute to work outside the city. The latter type of development, typically middle- and upper-middle income housing built on sizable lots, is

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[1]Interview with Westfield City Assessor, November, 1975.

Table No. 7

Residential Building

Westfield

	Number of Applications for Residential Building Permits	Average Cost Per Building (Materials and Labor Alone)
1965	197	$ --
1966	121	--
1967	240	--
1968	187	--
1969	312	--
1970	267	10,642
1971	906	11,616
1972	773	13,345
1973	203	21,423
1974	120	23,908

Source: Massachusetts Department of Community Affairs, and Lower Pioneer Valley Regional Planning Commission.

said to have become ever more dominant as residential space in the Springfield area has filled up, and as housing, educational, and other living costs in northern Connecticut have increased beyond comparable costs in Westfield.

A correlate to the ever more important residential develcpment

in Westfield has been an increase in shopping center construction along the major highway entrances to the downtown city area. Also consistent with the figures discussed above has been a recent slow-down reported in new housing construction generally, with that which has continued being mainly of apartment buildings and of a higher priced type of custom-built single-family housing.

The same informants of Westfield's urban growth believe that open farm lands have generally not been used for the rapidly expanding residential development of the past couple of decades. The prevailing view is that owners of open farm lands have not wanted to sell, unless receiving prices most residential developers have chosen not to pay. It is thus said that, on the whole, open agricultural land in outlying areas of the city has not been available for residential development. Equally important, it is observed, the outlying wooded areas of the city have been regarded as having a potentially more desirable residential character, particularly for the more expensive housing desired by the city's growing number of families with workers commuting to jobs outside the city. Today, however, those wooded areas capable of passing the city's rigorously enforced "percolation test" of a parcel of land's capacity to dispose of sewage on-site, are said to have been largely used-up.

As will be discussed in Chapter 2, these opinions concerning the use of open farm land in past urban expansion, or the amount of suitable non-agricultural land left for future urban expansion, do not conform with the statistics on Westfield's shifting land use patterns or its land capabilities. None the less, the presumed condition of nothing but farm land left for development,together with builders' current need to reduce housing costs by seeking lots more cheaply developed, is placing an increasing pressure on the city's open farm lands. It is generally assumed, therefore, that if economic conditions improve to a point enabling a renewal of previous levels of housing construction, the city's open farm lands will be developed at a previously unexperienced rate. Westfield's current zoning ordinance, adopted in 1966, has placed virtually all open agricultural land in a so-called "agricultural district" which permits new, single-family detached dwellings on lots of at least one-third acre in size. Thus, the city's zoning requirements would not inhibit the type of residential development that has characterized recent urban growth in the city's outlying areas.

Continued urban expansion in the area of Westfield known as the "hub" -- the area surrounding the existing, higher density central city -- is a different matter. A sizable area of the "hub" not already developed is open, actively farmed land, and in this respect could be easily developed.

However, much of this area is in a flood plain where passage of percolation tests for on-site sewage disposal would be doubtful, and where in some instances sites would need to be raised to avoid possible flood damage. Industrial and commercial construction, which typically could afford extensive site alterations, is generally inhibited in the "hub" by the inclusion of most currently available sites within the city's agricultural zoning district. Such development would need, moreover, to obtain permission to hook onto off-site municipal water and sewer facilities.

Thus, while significant areas of the "hub" have been developed for commercial uses in the past,the city's zoning ordinance and other regulations have been employed recently to block further, large-scale shopping center construction. Some city officials look with disfavor on proposed shopping "malls" out of a concern for retaining a vital central business district and for excessive burdens on city streets and services which, it is believed, would accompany the shopping malls.

Unlike the potential residential demand for space in Westfield's outlying areas, the demand for farm land in the "hub" for commercial sites is actual, with land prices able to be paid for such a use very much higher than what could be paid for a residential use. Whether such commercial construction continues to be blocked in the future, with high land prices either paid or not paid influencing prevailing expectations of land owners in the "hub", remains to be seen.

Chapter 2 - Farm Lands and Urban Development Potential

Since urban activities have long overshadowed farming in Westfield, it is not surprising that farming appears historically to have been disregarded in accounts of what makes Westfield the place it is.

A search, for example, of the Westfield library's sizable collection on the city's history and present revealed numerous descriptions of Westfield's industrial and commercial development, but not a single item on farming either in the past or present.[1] Similarly, the voluminous Westfield Master Plan, prepared for the Westfield Planning Board in 1964, contains only the briefest reference to farming.[2]

This disregard for farming in Westfield persists in a current lack of information about present agricultural conditions. Few of the Massachusetts Agricultural Experiment Station

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[1]The nearest any discussion came to agriculture in the city were accounts from the early part of this century of Westfield as the "Pure Food City", concerning the precedent-setting testing by the city's normal school and health department of the chemical composition of commercially sold food; see, for example, L.H.S., "Westfield and Pure Food", New England Business, February, 1923, pp. 19-20.

[2]Westfield Master Plan, Nord W. Davis, City Plan Consultant, Westfield Planning Board, Westfield, Massachusetts, 1964; this reference is to the fact that much of the city's land has good farm soil.

publications deal with Westfield. And while the city people in Westfield interviewed through this study were generally quite familiar with the city's urban development situation, they knew much less about the type or extent of farming existing in the city.

It seems ironic to note, then, that Westfield has been in the past, and remains today, much more an agricultural area than either Hampden County or the Commonwealth overall. Moreover, the belief that no significant amount of farm land has been used for the city's urban expansion over past years, or that the city's currently farmed lands are the only suitable areas left for future urban expansion, is on both counts unrepresentative of the actual situation found in the information examined through this study.

1. A NOTE ON INFORMATION SOURCES

Whereas an abundance of general statistics on agriculture from conventional sources -- such as the U.S. Census of Agriculture -- are available for Massachusetts and its counties, very little statistical information is available at the municipal level. Fortunately, two valuable sources of land use information do exist for Westfield. These are (1) the land use mapping and quantitative analysis based on aerial photographs conducted at the University of Massachusetts under the direction of William P. MacConnell, and (2) the general interpretations of

soils and topography made by the Soil Conservation Service of the U.S. Department of Agriculture.[1]

2. FAPM LANDS AND SHIFTING LAND USES -- MacCONNELL

MacConnell's mapped interpretation of aerial photographs taken in 1972 is the basis of the land use map of Westfield accompanying this report. MacConnell's quantitative analysis of aerial photographs taken in 1952 and 1972 is the basis for the bulk of the discussion here on farm and other lands in Westfield.

Certain limitations of the aerial photographic method of determining farm land uses should be noted. Being gleaned from a photograph, the specific uses and acreages identified are necessarily approximations of actual conditions. Most important, though, is the fact that the areas and uses indicated say nothing about ownership. Thus it is not possible from the MacConnell information to identify individual farms or types of operations, or to say how much land is owned or rented by active farmers. Thus land identified as an "abandoned field", for example, might be owned by an active farmer who intends to return it to productive use, or by a non-farmer waiting to sell for a non-farm use. Further, farmers often own substantial acreages of wood land, even if they rent tillable

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[1] Remote Sensing 20 Years of Change, op. cit.; Soils and Their Interpretations for Various Land Uses, City of Westfield, Hampden County, Massachusetts (U.S. Department of Agriculture, Soil Conservation Service, in cooperation with Hampden Conservation District, March 1970), an explanatory book accompanying a series of land capability maps.

land for crop production; how much wood land is owned by farmers, or how much is used, for example, as pastured wood land, cannot be determined from MacConnell's information. Finally, because we do not have a map of land uses in 1952, when MacConnell's figures on uses and acreages in 1952 and 1972 are compared, only a comparison of total acres can be made; that is, it is not possible to determine whether a specific area of land in a specific location has converted from one use to another.

Having said this, quite a lot can be learned from MacConnell's information. Table No. 8 shows percentages of the total land areas of Massachusetts, Hampden County, and Westfield, estimated to have been actively farmed or recently abandoned fields, in 1952 and 1972. These areas, including both actively farmed and abandoned fields, are significant of the total amount of land that could be used for farming with physical ease by virtue of having neither been built upon, nor grown-up completely to trees. As Table No. 8 indicates, the proportion of Westfield's total land area in such a condition is about twice that in the Commonwealth or Hampden County, and has declined at a lesser rate between 1952 and 1972.[1]

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[1] Calculations for Massachusetts shown in Table No. 8 and Table No. 9 are based on acreages for the Commonwealth distributed by the Massachusetts Audobon Society in its "Public Service Information", Lincoln, Massachusetts, October 23, 1974; acreages for Hampden County and Westfield used throughout this report are given in the MacConnell publication cited above.

Table No. 8

Percentage of Total Land Area in Non-wooded, Actively Farmed and Abandoned Agricultural Lands

	Percentages		Percentage Change
	1952	1972	1952-1972
Massachusetts	21.0	13.6	- 35
Hampden County	20.0	11.7	- 42
Westfield	30.5	21.4	- 30

Source: MacConnell

Whether this non-wooded agricultural area is likely to convert to an urban use will depend, of course, on a variety of factors -- a more important factor being the number of people living near the farm land concerned. One measure of this is given in Table No. 9, which shows the number of residents per acre of non-wooded, actively farmed or recently abandoned agricultural land in 1952 and 1972, for Massachusetts, Hampden County, and Westfield. Due to the larger proportion of Westfield's total land area in such farm lands, and to its lesser rate of decline, the number of residents per acre of farm land in Westfield is, as one might expect, about half that for the Commonwealth or Hampden County, for both 1952 and 1972. However, due to the rapid increase of Westfield's population since 1950, the percentage increase in numbers of people per acre is significantly higher in Westfield than for the Commonwealth, and the same as that for Hampden County.

Table No. 9

Number of People Per Acre of Non-Wooded, Actively Farmed and Abandoned, Agricultural Land

	No. of People per Acre		Percentage Change
	1952	1972	1952-1972
Massachusetts	4.4	8.3	+ 87
Hampden County	4.6	9.8	+114
Westfield	2.3	4.8	+114

Source: MacConnell; population, for 1950 and 1970, U.S. Census

More indicative of land use changes affecting active farming is, however, the information shown in Table No. 10. This table indicates percentages of the total land areas of Westfield and Hampden County in actively farmed land by tilled or pastured use, in recently abandoned farm fields, in wood land, and in urban use, for 1952 and 1972.

The table indicates the comparatively greater growth of urban land uses in Westfield than in the county as a whole, as well as the comparatively greater use of land for agriculture in Westfield. But perhaps most insignificant are the comparative figures for actively used "tilled" farm land. Such land is the most productive and hence valuable in agricultural terms. Westfield experienced a greater percentage loss in

Table No. 10

Land Uses

	Percentage of Total Land Area		Percentage Change	Percentage of Total Land Area		Percentage Change
LAND USES	1952	1972	1952-1972	1952	1972	1952-1972
Farm Land						
1) Actively Used						
Tilled	14.2	11.5	- 18	5.0	5.0	---
Pastured	11.4	5.5	- 52	9.6	2.8	- 71
Subtotal	25.5	17.0	- 33	14.6	7.8	- 46
2) Abandoned Fields	5.0	4.4	- 12	5.5	3.8	- 30
Total Farm Land	30.5	21.4	- 30	20.0	11.7	- 42
Wooded	57.0	49.3	- 14	67.8	66.0	- 3
Urban	8.2	21.4	+162	8.1	16.1	+100
Other	4.3	7.9		4.1	6.2	
TOTAL	100.0	100.0		100.0	100.0	

Source: MacConnell

this type of farm land than did the county as a whole, which in percentage terms for the county remained the same over the two decade period. The two decade decline in Westfield's actively tilled farm land of eighteen percent has also been greater than the decline of its abandoned farm land.

The actual acreage of land involved in Westfield's shifting land uses are indicated in Table No. 11. As is shown here, a little over half of the city's urban expansion between 1952 and 1972 has apparently been onto previously actively farmed land, with a third of this area having been tilled land. Wood land has been used for about 40 percent of the city's urban expansion, with abandoned fields making up the remainder of about eight percent of the city's twenty year urban expansion. From this account of the city's changing land uses, it is clear that a substantially larger area of Westfield's farm lands have been used for urban development over the last two decades than most city people interviewed during this study realize.

3. FARM LAND -- U.S. AGRICULTURAL CENSUS

The U.S. Agricultural Census provides information for states and counties, but not municipalities. Included are statistics on acreages of land in active farming by type of use, including

Table No. 11

Westfield

Changes in Acreage by Types of Land Use

	Acres 1952	Acres 1972	Change in Acreage 1952-1972
INCREASED ACREAGES			
*Urban	2,481	6,506	+ 4,025
**Urban - Related	---	1,081	+ 1,081
Total	2,481	7,587	+ 5,106
DECREASED ACREAGES			
Actively Farmed			
Tilled	4,304	3,512	- 791
Pastured	3,452	1,667	- 1,577
Subtotal	7,756	5,179	- 2,577
Abandoned Fields	1,508	1,332	- 176
Wooded Land	17,349	14,996	- 2,106
***Total	26,613	21,507	- 5,106

Source: MacConnell

* Urban acreage includes land used for commercial, industrial, transportation, and residential purposes.

** Urban related acreages includes land used for: outdoor recreation, 466 acres; waste disposal, 371 acres; and public land, 244 acres.

*** Not included in these figures are 76 acres of productive fruit orchard in both 1952 and 1972, or 20 acres of abandoned fruit orchard in 1952 and 25 acres of abandoned orchard in 1972.

land both owned and rented by farmers. Based on a nearly 100 percent survey of farm operators, the Agricultural Census provides a more accurate picture of agricultural land uses than does the MacConnell information based on aerial photographs. We thus examined the Agricultural Census farm land use information for the Commonwealth and Hampden County for the years 1950 through 1969 -- years comparable to the 1952 and 1972 dates of MacConnell's photographs -- and compared the results to MacConnell's figures. We found that the Agricultural Census information gives a higher figure for non-wooded, actively farmed land in 1950 than does MacConnell for 1952, and that the Agricultural Census gives a lower figure for such land in 1969 than does MacConnell for 1972. Correspondingly, the rate of decline in actively farmed land over the period based on the Agricultural Census information is about a third greater than is the rate of decline based on MacConnell's information. This might be accounted for by land which had actually been abandoned most recently by farmers, simply not looking in aerial photographs as if it had.

We thus estimated farm land acreages for Westfield in 1969 based on the known number and type of farm operations in the city,[1] together with average acreages by type of farm use for Hampden County provided by the Agricultural Census. We concluded that the area of the city under active farm ownership or use by so-called "commercial" farms -- that is,

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[1]The number and types of farms in Westfield were discussed in Part 2.

those with gross sales in 1969 of $5,000 or above -- may actually be only three-quarters of the acreage MacConnell gives for actively farmed land in Westfield.

Because, however, the estimates based on the Agricultural Census information are too gross to be considered reliable, our discussion here of farm land acreages will continue to depend on MacConnell's information.

4. COMPARISON OF LAND USED FOR FARMING TO LAND SUITABLE FOR FARMING

Table No. 12 shows the total acreage of land in Westfield not committed to an urban use in 1972, considered by soil scientists of the U.S. Soil Conservation Service to have either slight or moderate limitations for agriculture.[1] The classification of such lands is made without regard to whether the land is actually being used for farming. While the terms slight and moderate "limitations" have a negative connotation, they refer in fact to lands which generally are the best, or most suitable for an agricultural use.

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[1] The Soil Conservation Service information was prepared in 1970, taking into account the area of the city then urbanized. We have adjusted these 1970 estimates of areas in urban use upwards to include the urbanized areas indicated by MacConnell in 1972. This adjustment was made by comparing a map of the Soil Conservation Service information by means of an overlay, to the MacConnell 1972 land use map.

This method of overlaying maps to determine comparative use areas and their locations has been used as well in making the comparative estimates discussed subsequently in this report.

It should be noted as well that the Soil Conservation Service's interpretation of soils and topography with slight or moderate limitations for agriculture, which will be referred

Table No. 12

Westfield

Acres of Land Uncommitted to
Urban Uses with Slight or Moderate
Limitations for Agricultural Use

1972

Limitations for Agriculture	Acres	Percentage of Total City Land Area
Slight	4,730	15.5
Moderate	8,936	29.4
TOTAL	13,666	44.9

Source: U.S. Soil Conservation Service; MacConnell

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to throughout our discussion of farm land uses, is based in turn on a second system of classifying agricultural land capabilities. This second system entails a more detailed identification of lands according to thirteen categories of land capability. The designation according to the first system of lands with slight limitations for agriculture, includes lands identified by the second system as categories one and two. The designation according to the first system of lands with moderate limitations for agriculture, includes categories three and four of the second land capability classification system. The Massachusetts Department of Agriculture is considering as lands most valuable for preservation through a development rights acquisition program, those designated by the Soil Conservation Service's second land capability system as categories one, two, and three. Thus, the land area discussed here as having only slight limitations for agriculture would all fall within the Department of Agriculture's primary concern for preservation, while only a portion of the area designated as having moderate limitations for agriculture would fall within the Department's preservation concern. We do not know from the information we have examined in preparing this report the area of land with moderate limitations for agriculture that would fall within the Soil Conservation Service's second system of classification of class three land.

By comparing the figures shown in Table No. 12 to Westfield's farm land use areas (Table No. 11), we can see that the land area of the city suitable for farming is considerably larger than that either still actively farmed or recently abandoned.

The interpretation of land suitable for farming by the Soil Conservation Service indicates which lands could be used for a greater or lesser range of crop production by virtue of a lesser or greater alteration of natural conditions. Thus land with "slight" limitations for farming would require the least improvement to be productive of the widest range of crops. To make land with greater natural limitations more productive would require more improvements, such as installing drainage systems, terracing, removing stones, fertilizing the soil, and so forth. Yet, even at that, the range of possible crop production would remain comparatively limited.

In the past, when agriculture was more prevalent, many of the limitations today identified by the Soil Conservation Service were often overcome in the normal course of developing an area for farming. Thus, many productive farms remaining in the region today are located in areas which soil scientists would classify generally as having limitations for agriculture more severe than either "slight" or "moderate".

In Westfield, these would likely be dairy farms, with good producing hay, corn, grain, and pasture lands. While these farms would probably not be as good for vegetable production, their crop and pasture lands probably would be good for other grain or livestock operations, or in some cases for fruit orchards.

We have, accordingly, made an effort to determine the extent to which land used for farming today or in the recent past in Westfield is located in or outside the areas designated as having slight or moderate limitations for agriculture. Table No. 13 shows acreages in 1972 of land then actively farmed or recently used for farming, together with wood land, by their location in areas generally determined to have slight or moderate limitations for agriculture, or outside these two areas. Table No. 14 shows percentages of the total acreage currently farmed, recently farmed, or in wood land, by the location of such land in the three types of land areas.

As Table No. 14 indicates, then, about one-third of all land actively farmed in 1972 in Westfield was in the area with only slight limitations for agriculture, another third in the area with moderate limitations for agriculture, with the remaining third lying outside either of these areas.

Table No. 13

Westfield

Location of Land Used for Farming or Woods
in Relation to Land Suitable for Farming

1972

	Acres			
	Slight Limitations For Farming	Moderate Limitations For Farming	Other Land	TOTAL ACROSS
Actively Farmed Land, Tilled or Pastured	1,817	1,732	1,630	/ 5,179
Abandoned Fields	155	305	872	/ 1,332
*Wood Land	2,758	6,899	5,364	/15,021
TOTAL DOWN	4,730	8,936	7,866	

Source: U.S. Soil Conservation Service; MacConnell

*Acreages of productive fruit orchard and abandoned orchard are included in this category, distributed as follows: 38 acres in area with slight limitations; 38 acres in area with moderate limitations; and, 25 acres in other land.

Table No. 14 also indicates that in 1972 the bulk of abandoned fields -- some 66 percent -- lay in areas with generally the greatest limitations for agriculture. The "abandoned fields" category of MacConnell's information is said to have been mainly previously pastured land. Since pasture land would typically have been the least improved by farmers, it is not surprising that the largest amount of abandoned farm land would be located outside areas naturally most suitable for farming.

Table No. 14

Westfield

Percentage of Land Used for Farming or Woods, which is in Areas with Slight or Moderate Limitations for Agriculture, or Other Land

1972

	Percentage			
	Slight Limitations for Farming	Moderate Limitations for Farming	Other Land	TOTAL ACROSS
Actively Farmed Land, Tilled or Pastured	35.1	33.4	31.5 /	100
Abandoned Fields	11.6	22.9	65.5 /	100
*Wood Land	18.4	45.9	35.7 /	100

Source: U.S. Soil Conservation Service; MacConnell

* Acreages of productive and abandoned fruit orchard are included in this category as noted in Table No. 13.

Table No. 15

Westfield

Percentage of Area with Slight or Moderate Limitations for Agriculture and Other Land, which is in Areas Used for Farming and Woods

1972

	Percentage			
	Actively Farmed Land, Tilled or Pastured	Abandoned Fields	Wood Land	TOTAL ACROSS
Slight Lims. for Farming	38.4	3.3	58.3 /	100
Moder. Lims. for Farming	19.4	3.4	77.2 /	100
Other Land	20.7	11.1	68.2 /	100

Scurce: U.S. Soil Conservations Service; MacConnell

Table No. 15 shows percentages of the areas with slight or moderate limitations for agriculture and other land, used in 1972 as active farm land, abandoned fields, and wood land. Thus, the bulk of Westfield's land area with only slight or moderate limitations for agriculture was not in 1972 in an active agricultural use: 62 percent of the area with slight limitations was not actively farmed, while 81 percent of the area with moderate limitations was going unused for farming. Thus, much of Westfield's land area which may appear unsuitable for farming because of tree growth upon it probably could, in fact, be converted to a productive agricultural use.

5. FLOOD PLAINS -- SUITABILITY FOR AGRICULTURE AND URBAN SEWAGE DISPOSAL

A significant area of Westfield lies in a flood plain, created by the two major rivers that flow through the city. Of the city's total land area not already committed to an urban use, some 16 percent, or 4,030 acres, is an area subjected to substantial, periodic flooding, with highest flood levels occurring theoretically every 100 years.[1] Westfield residents do not view floods as merely a theoretical threat, however, since the highest flood of record in Westfield occurred as recently as 1955. Other substantial flooding had occurred

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[1] We have mapped the flood plain on a land use map overlay accompanying this report from information provided by (HUD) FIA Flood Hazard Boundary Map; for additional data see as well, Flood Plain Information, Westfield and Little Rivers, Westfield, Massachusetts (Prepared for The City of Westfield, by the U.S. Dept. of the Army, New England Division, Corps of Engineers, Waltham, Massachusetts, June 1969).

before then within current memory, and has occurred as well since 1955.

But of greater concern to farmers than a devastating flood that may occur only once every decade or so are other, more regular conditions of a flood plain. These are typically a high water table, large areas lying under water during periods of high run-off each year, the silting of farm land from such run-off, and soil types typically found in river basin areas. Because typical soil types and the terrain of river basins are often superior for farming, this condition tends to offset the other characteristics of a flood plain which are usually not as good.

The use of flood plains for non-agricultural, urban purposes, on the other hand,typically encounters problems of much greater severity. These range from: unstable soils, offering poor support to building foundations; wet basements; difficult site drainage; on-site sewage disposal difficulties or impossibilities; to, of course, damaged buildings, roads, and grounds from flood waters themselves. In addition, urban uses of a flood plain jeopardizes the water quality of aquifer systems as well as of the rivers and other water bodies affected.

We have estimated the areas of Westfield's flood plain suitable for farming, based on the slight and moderate limitations for agriculture classification system discussed above. We have also estimated areas of the flood plain suitable for urban development. For such a purpose, the U.S. Soil Conservation Service has prepared, in addition to its interpretation of land suitable for farming, a series of maps indicating areas with soil and other limitations for a variety of urban uses. We have chosen the Soil Conservation Service's interpretation of land with limitations for on-site sewage disposal as most representative over-all of the physical limitations presented to further urban expansion in Westfield. This choice was made because: residential development has used the largest land area in Westfield's recent period of urban expansion; nearly all prospective residential development would need to continue to use on-site sewage disposal systems, unless, of course, the city were to expand greatly the area serviced by its municipal sewage system; Westfield has a stringent "percolation test" for on-site sewage disposal capacity which, if failed, would prohibit development dependent on this type of sewage disposal.

Table No. 16 shows our estimates of areas of the flood plain with slight or moderate limitations for agriculture, and of areas with slight or moderate limitations for on-site sewage disposal. As this table indicates, most of the flood

Table No. 16

Westfield

Areas of Flood Plain Suitable for
Agriculture and On-Site Sewage Disposal

1972

Suitable for Agriculture

	Acres	Percentage of Total Flood Plain Area
Slight Limitations for farming	1,903	47.2
Moder. Limitations for farming	1,757	43.6
Subtotal	3,660	90.8
Unsuitable for farming	370	9.2
TOTAL	4,030	100.0

Suitable for On-Site Sewage Disposal

	Acres	Percentage of Total Flood Plain Area
Slight Limitations for Sewage Disposal	511	12.7
Moder. Limitations for Sewage Disposal	34	.8
Subtotal	545	13.5
Unsuitable for Sewage Disposal	3,485	86.5
TOTAL	4,030	100.0

Area Suitable for Agriculture, with Slight or Moderate Limitations, but Unsuitable for On-Site Sewage Disposal

Acres	Percentage of Total Flood Plain Area
3,115	77.3

plain area -- 91 percent -- is suitable for agriculture with only slight or moderate limitations. On the other hand, most of the flood plain is not suitable for on-site sewage disposal -- some 87 percent of the flood plain area. All of the flood plain area suitable for on-site sewage disposal is also suitable for agriculture; accordingly, 77 percent of the flood plain area is suitable for agriculture, but not for on-site sewage disposal.

Were the capacity of Westfield's flood plain to dispose of sewage on-site the only urban development question in this area of the city, a very large portion of the city's total land area most suitable for farming would not be subjected to urban development pressures. This is to say, about one-third of all the land in Westfield with only slight limitations for an agricultural use is in the flood plain and unsuitable for on-site sewage disposal. In addition, about seventeen percent of all land with moderate limitations for an agricultural use is in this situation.

The flood plain area in Westfield is, however, in demand for use as commercial sites probably more so than for residential sites. As discussed earlier, developers of commercial sites can usually afford the extensive site alterations required to overcome natural obstacles to development in flood plains. In fact, a large amount of the recent commercial development

spreading from Westfield's downtown toward East Springfield has been in the flood plain and has entailed extensive site alterations. Whether such development continues to occur in the future will rest primarily, therefore, not so much with natural obstacles to it as with the actions of Westfield's public officials.

6. SPACE AVAILABLE FOR BOTH FARMING AND URBAN DEVELOPMENT

Using information for the entire city of Westfield concerning areas suitable for farming and on-site sewage disposal, we can estimate the space available in the city to accommodate both farming and additional urban development. Based on our map-overlay method of estimating land acreages and their location, it is apparent that:

1) Virtually all of the land area of Westfield not already committed to an urban use in 1972, which has only slight or moderate limitations for on-site sewage disposal, is also land that has only slight or moderate limitations for an agricultural use.

2) The area of Westfield not already committed to an urban use in 1972, which has only slight or moderate limitations for agriculture, is roughly 50 percent larger than the area with only slight or moderate limitations for on-site sewage disposal. Another way of expressing this is that two-thirds of the city's area most suitable for agriculture is also most suitable for on-site sewage disposal.

As noted above, a substantial area of undeveloped land in the city most suitable for agriculture but not for on-site sewage disposal, is located in a flood plain. Table No. 17 compares the areas with only slight or moderate limitations for agriculture, to areas with only slight or moderate limitations for on-site sewage disposal, by their location in or out of the city's flood plain. As this table indicates, the largest area most suitable for both agriculture and on-site sewage disposal lies outside the flood plain; thus, further demand in Westfield for residential land capable of disposing of sewage on-site would be greatest in the outlying areas of the city, which are outside the flood plain, and also most suitable for agriculture.

Table No. 17

Westfield

Comparison of Areas with Slight or Moderate Limitations for Agriculture to Areas with Slight or Moderate Limitations for On-site Sewage Disposal, by Location In or Out of the Flood Plain

1972

	Acres	
	Most Suitable for both Farming and Sewage Disposal	Most Suitable for Farming Only
LOCATION		
In Flood Plain	545	3,115
Outside Flood Plain	8,465	1,541
TOTAL	9,010	4,656

Source: U.S. Soil Conservation Service; MacConnell

It is also apparent, however, from the acreages presented in Table No. 18 that ample space should be available in Westfield to accommodate both farming and future urban development, particularly of the type of residential development characterizing the city's past urban expansion.[1] Thus, as this table shows: by subtracting the acreage of active or abandoned farm land located in areas most suitable for agriculture from either (1) the total area of land most suitable for agriculture, or (2) the total area most suitable for both agriculture and on-site sewage disposal, we can see that the remaining area in either case is larger than the total area used by all types of urban development from 1952 through 1972.

It appears , therefore, that the belief of Westfield city people that land other than currently farmed land suitable for development has been used up, and that future residential development would have to use presently farmed land, is ill-founded. However, whether land currently used for farming, or not now farmed but most suitable for farming, will remain undeveloped for urban uses is another issue.

Much of the acreage identified as suitable for urban development because sewage could be disposed of on-site may still be

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[1]It should be noted that the acreages shown in Table No. 18 of active or abandoned farm land are those of only the farm lands located in the area of the city with slight or moderate limitations for agriculture; an additional, sizable acreage of land either actively farmed or recently abandoned is located in an area designated as having generally more severe limitations for agriculture, as well as for on-site sewage disposal; see tables 13, 14, and 15, above.

undesirable for an urban use for a variety of reasons. A large portion of it is undoubtedly inaccessible from present roads, would require lengthy extensions of utilities to new housing sites, or may be located in sections of the city presently serviced by limited-capacity arterial highways. These are restrictions to urban development which to be overcome would require a planned public investment program for future transportation and utility development in the city.

Table No. 18

Westfield

Estimate of Space Available for
Both Farming and Urban Expansion

1972

	Acres	
	Area with Slight or Moderate Limitations for Farming	Area with Slight or Moderate Limitations for Sewage Disposal
TOTAL	13,666	9,010
Area Actively Farmed	3,549	3,549
Area of Abandoned Fields	460	460
Total Farm Land	4,009	4,009
Balance (Total Area Less Total Farm Land)	9,657	5,001
Total Area of Urban Expansion, 1952-1972	4,025	4,025

Source: U.S. Soil Conservation Service; MacConnell

In the meanwhile, currently or recently farmed land, particularly that with existing road frontage, will remain the easiest and hence cheapest to develop. As discussed above, a substantial area of Westfield's previously farmed land has already been converted to an urban use since the early 1950's. If residential building activity in the city resumes its pre-1971 level, the city's current or recently farmed areas will very likely be in demand for residential development at an accelerated pace.

Finally, as is indicated by the zoning overlay of our land use map, virtually all the area most suitable for agriculture has been placed in a so-called "agricultural" district permitting single-family dwellings on lots of at least one-third acre in size. Such zoning will be of no help in directing low-density residential development away from currently farmed lands or lands not now farmed but most suitable for agriculture.

7. FARM AREAS THAT MIGHT BE PRESERVED BY A DEVELOPMENT RIGHTS ACQUISITION PROGRAM

The surest way to preserve currently farmed lands and others most suitable for farming for a future agricultural use would be through the purchase of their development rights. The Massachusetts Department of Agriculture is proposing that currently farmed lands be given first priority under a

development rights acquisition program. Land most suitable for farming from a land capability point of view, but not now farmed, would be given second priority by the Department's proposed program. The acreages of land in Westfield which might be considered eligible for development rights purchasing are listed in Table No. 19.

Thus, our first category of acreages shown in Table No. 19 is of those lands actively farmed in Westfield in 1972, including lands located in the areas of the city with slight or moderate limitations for agriculture as well as those located outside these areas. Our second category is of land in the area with only slight limitations for agriculture but not actively farmed in 1972; included here is 155 acres of recently abandoned fields. This second category of land would presumably all be eligible under the Department of Agriculture's proposed program.[1] Finally, our third category is of land with only moderate limitations for agriculture but not actively farmed in 1972; included here is 305 acres of recently abandoned fields. Only some of this category of land would be eligible under the Department's proposed program.

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[1] See footnote on page 91.

Table No. 19

Westfield

Areas of Land That Might Be Preserved for Future Farming

1972

	Acres	Percentage of Total City Land Area
I. Actively Farmed Land		
LOCATED IN AREAS WITH:		
Slight Limitations for Farming	1,817	6.0
Moderate Limitations for Farming	1,732	5.7
Other Areas	1,630	5.4
TOTAL	5,179	17.0
II. Remaining Unfarmed Land		
Located in Areas with Slight Limitations for Farming	2,913	9.6
(abandoned fields	155	.5)
III. Remaining Unfarmed Land		
Located in Areas with Moderate Limitations for Farming	7,204	23.7
(abandoned fields	305	1.0)
IV. Summary		
Category One	5,179	17.0
Category Two	2,913	9.6
Subtotal	8,092	26.6
Category Three	7,204	23.7
TOTAL	15,296	50.3

The largest proportion of abandoned fields in Westfield -- 872 acres, or 2.9 percent of the city's total land area -- are located outside the areas with only slight or moderate limitations for agriculture. This acreage has not been included in our list of acreages that might be eligible under the proposed development rights program. Whether such land should be eligible is a question which might be considered in devising guidelines for the program.

APPENDIX - LAND USE MAPPING: SOURCES AND PROCEDURE

I. Basic Map; showing 1972 conditions.

Source: William P. MacConnell, Remote Sensing 20 Years of Change in Hampden County, Massachusetts, 1952-1972, Research Bulletin Number 628 (Published by the Massachusetts Agricultural Experiment Station, University of Massachusetts, Amherst, Massachusetts, July 1975).

Land use map from aerial photographs taken in 1972, available from the Department of Forestry and Wildlife Management, University of Massachusetts.

Procedure: We grouped MacConnell's several land use categories, shown on his map, as follows:

A. Agriculture

1. Active pasture land (P)
2. Active and recently used tilled land (T,TU)
3. Abandoned fields and abandoned orchards (AF, AO)
4. Productive orchard (O)

B. Residential

1. Lower density (URL,URO,URF,UCR,UE)
2. Higher and moderate density (UA, UT, URH,URM)

C. Commercial and Industrial

1. Lower density (UL, UH, US)
2. Higher density (UI, UC)

D. Woods

1. Hardwood (H)
2. Softwood (S)
3. Mixed hardwood and softwood (HS, SH)

E. Wetlands

1. Water bodies, streams (W)
2. Other (SS, M, SM, DM)

F. Open Public (UTA, UP, t)

G. Open, idle in urban area (UO)

II. Land Use Map Overlays

A. Limitations for agriculture

Source: Soils and Their Interpretations for Various Land Uses, City of Westfield, Hampden County, Massachusetts (U.S. Department of Agriculture, Soil Conservation Service, in cooperation with Hampden Conservation District, March 1970).

Procedure: We photographed a copy of SCS map, and indicated areas shown on the original to have either Slight or Moderate Limitations for Agriculture.

B. Limitations for on-site sewage disposal.

Source: Same as above.

Procedure: Same as above, showing areas with Slight or Moderate Limitations for on-site sewage disposal.

C. Flood Plains

Source: FIA Flood Hazard Boundary Map

Procedure: We copied mapped flood plain areas onto clear overlay.

D. Zoning

Source: Westfield City Planning Board.

Procedure: We copied map onto a clear overlay.

REFERENCES

The following books, papers, articles, magazines and bills represent the basic reference materials for research into the economic, legislative and legal arguments and approaches to the conservation of farmland. Further references can be found by reading the works listed below by title.

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5. The Fertile Crescent of Massachusetts: Farmland Policy Issues of the Connecticut River Valley, Rutherford H. Platt, Sarah Fernandez & Lynn Reynolds, Connecticut River Watershed Council, Inc., Easthampton, Massachusetts, January 1976.

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19. The Taking Issue. Bosselman, Fred, and David Callies, and John Banta. Washington, D.C.: U.S. Government Printing Office, 1973.

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21. The Transfer of Development Rights: A New Technique of Land Use Regulations. Ed. Jerome G. Rose, Center for Urban Policy Research, Rutgers - The State University, New Brunswick, New Jersey, 1975.

22. "Urban Threats to Rural Lands: Backgrounds and Beginnings", Philip M. Raup, Journal of the American Institute of Planners, November 1975, pp. 371-378.

23. Vermont Farming in the 1970's: A Question of Agricultural Land Reform. Benjamin Huffman, Montpelier, VT. Oct. 1975.

Figure A

City of Westfield, Massachusetts

LIMITATIONS FOR AGRICULTURE

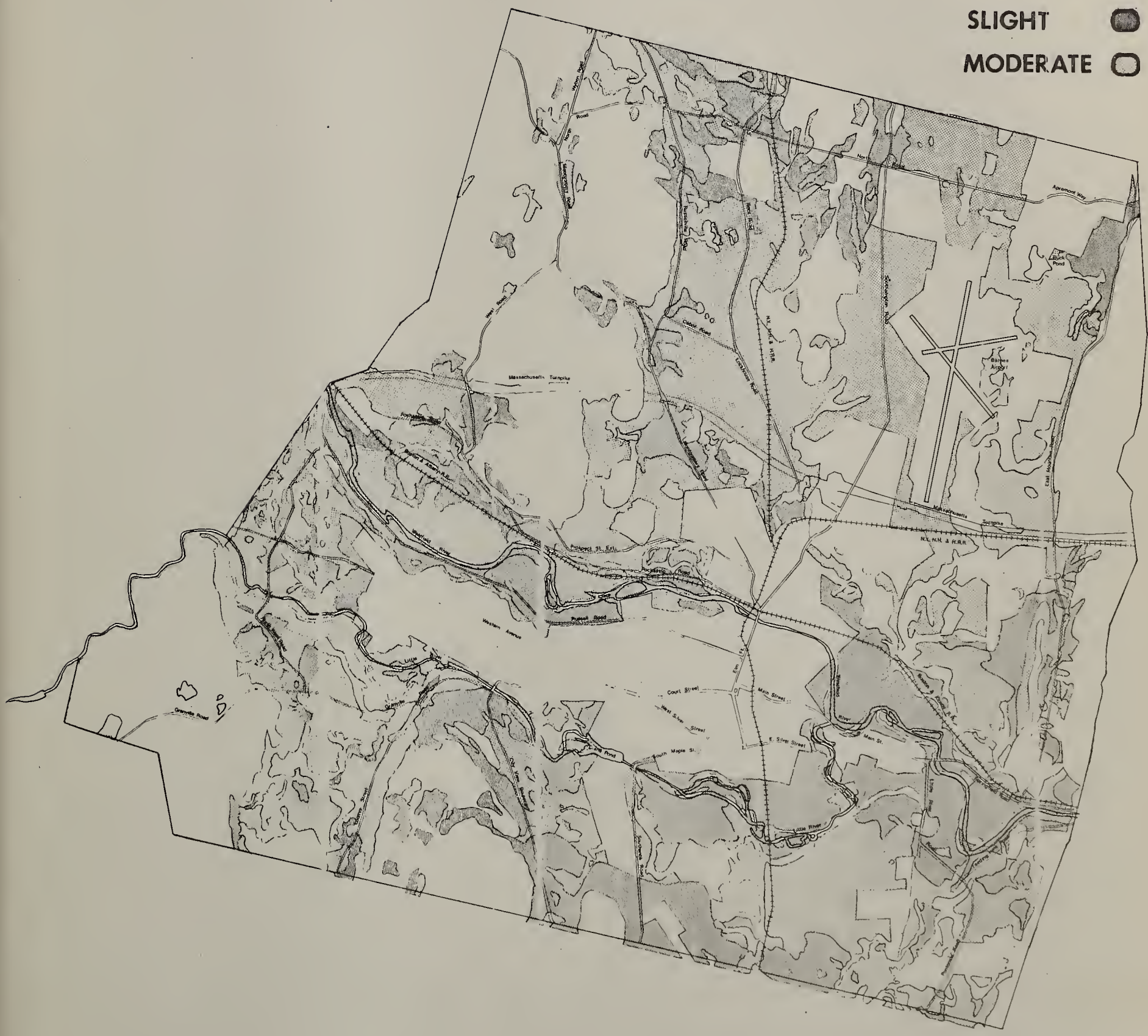
N

0 1000 3000 5000 10,000

SCALE IN FEET

SLIGHT

MODERATE



prepared by: JUSTIN GRAY ASSOCIATES • Cambridge, Massachusetts

Figure B

City of Westfield, Massachusetts

LIMITATIONS FOR ON-SITE SEWAGE DISPOSAL

N

0 1000 3000 5000 10,000

SCALE IN FEET

SLIGHT

MODERATE

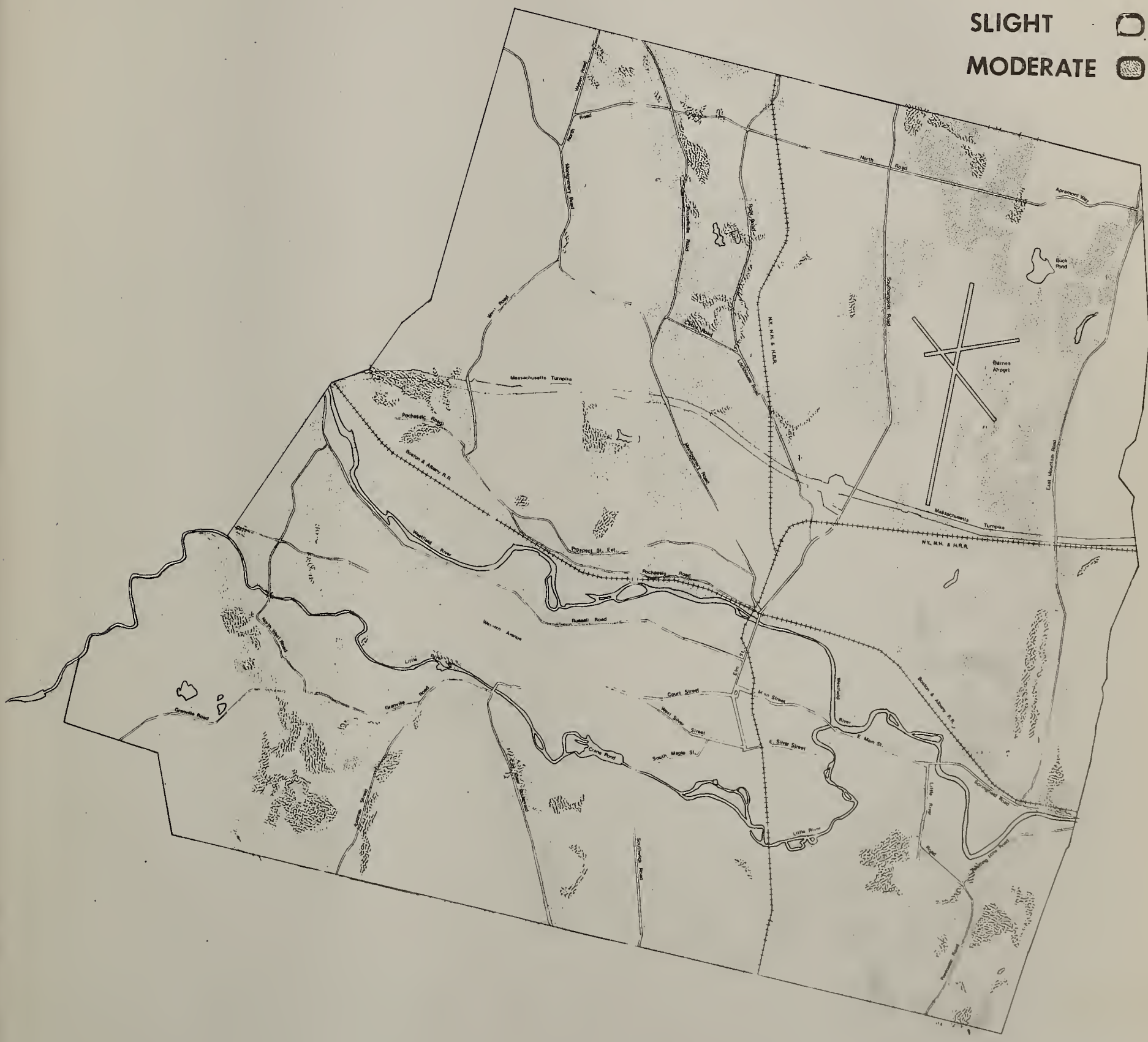


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Figure C

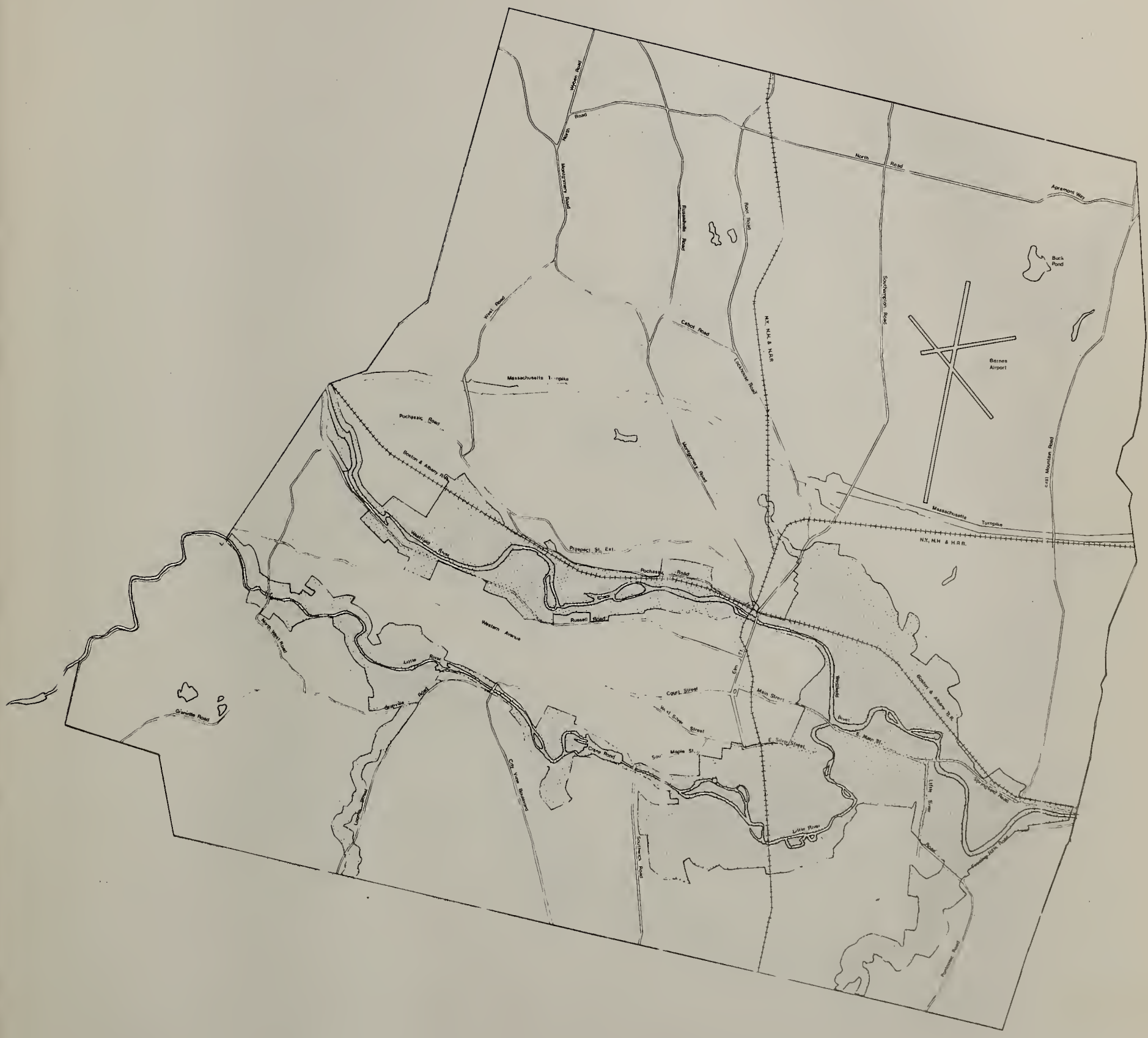
City of Westfield, Massachusetts

FLOOD PLAINS

N

0 1000 3000 5000 10,000

SCALE IN FEET



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City of Westfield, Massachusetts

COMPOSITE MAP OF FIGURES A, B and C

N

0 1000 3000 5000 10,000

SCALE IN FEET

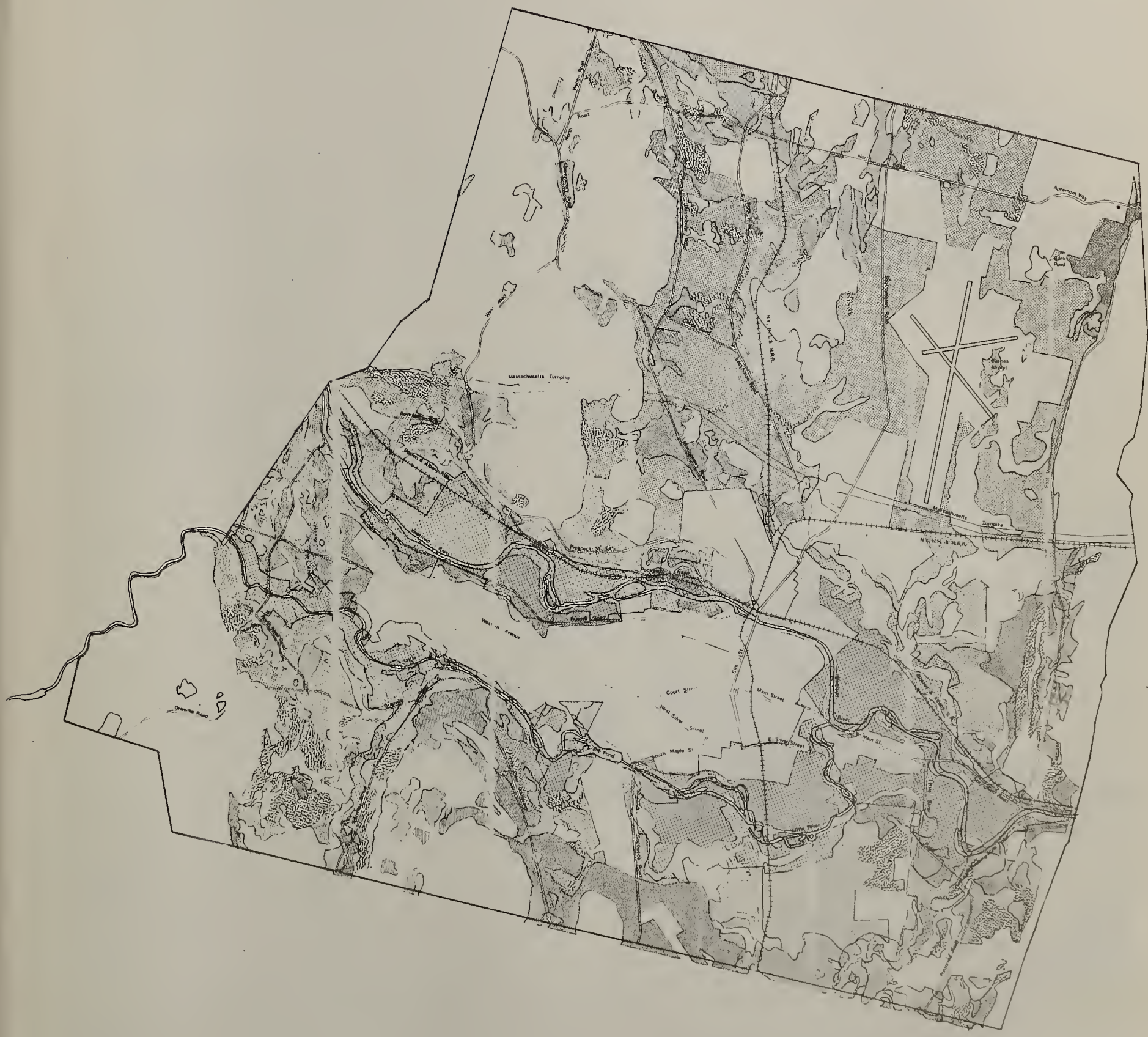

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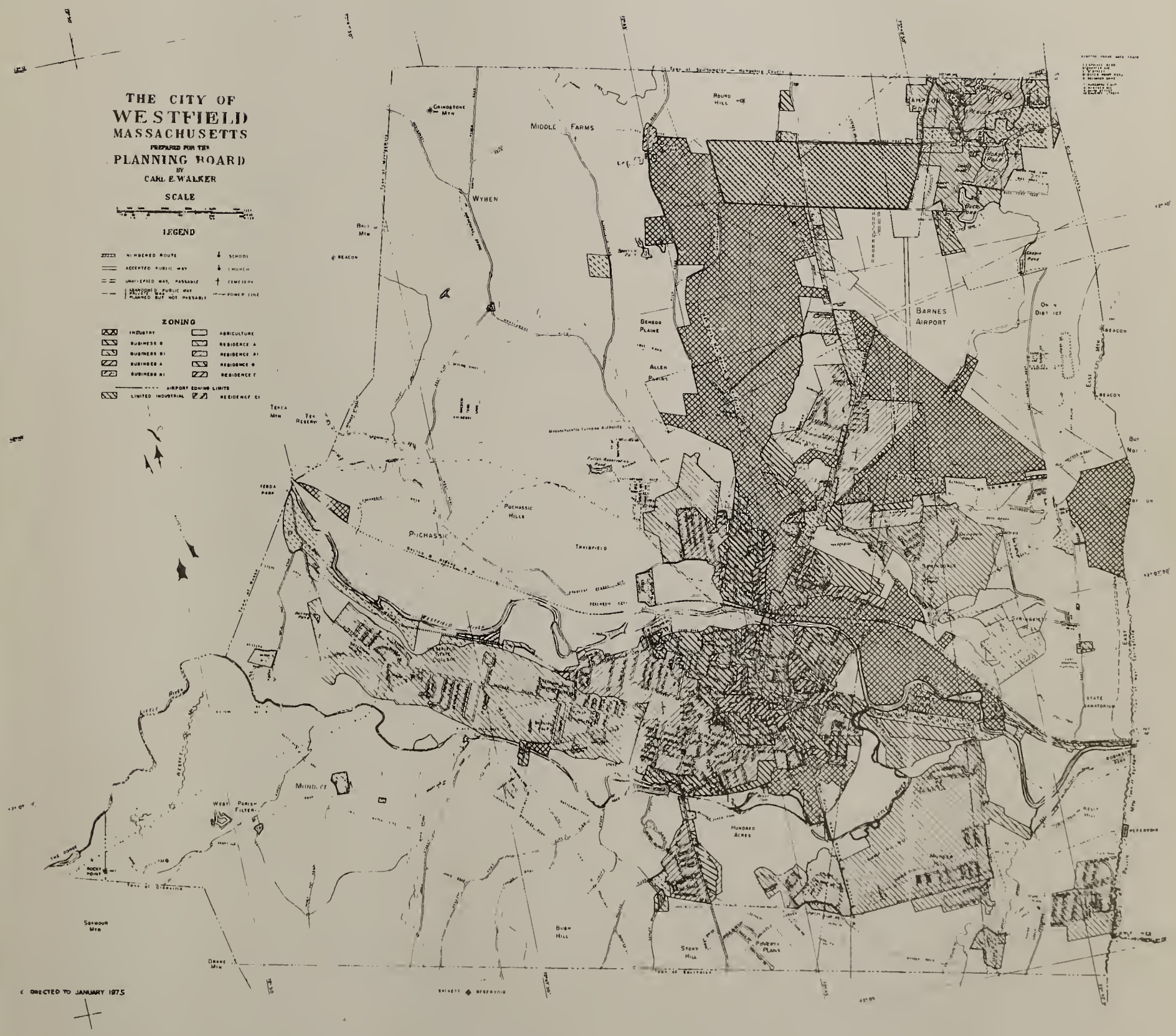
Figure D


THE CITY OF
WESTFIELD
MASSACHUSETTS
PREPARED FOR THE
PLANNING BOARD
BY
CARL E. WALKER
SCALE
LEGEND
NUMBERED ROUTE
ACCEPTED PUBLIC WAY
UNACCEPTED WAY, PASSABLE
ABANDONED, PUBLIC WAY
PROJECT, NOT PLANNED BUT NOT PASSABLE
SCHOOL
CHURCH
CEMETERY
POWER LINE
ZONING
INDUSTRY
BUSINESS B
BUSINESS B1
BUSINESS A
BUSINESS A1
AGRICULTURE
RESIDENCE A
RESIDENCE A1
RESIDENCE B
RESIDENCE C
AIRPORT ZONING LIMITS
LIMITED INDUSTRIAL
RESIDENCE C1
Grindstone Mtn
Middle Farms
Round Hill
Wyben
Ball Mtn
Beacon
Barnes Airport
Bensos Plaine
Allen Plains
Beacon
Beacon
Tekoa Mtn
Tek Reserv
Feeda Park
Pochassic Hills
Pochassic
Tribefield
Westfield River
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